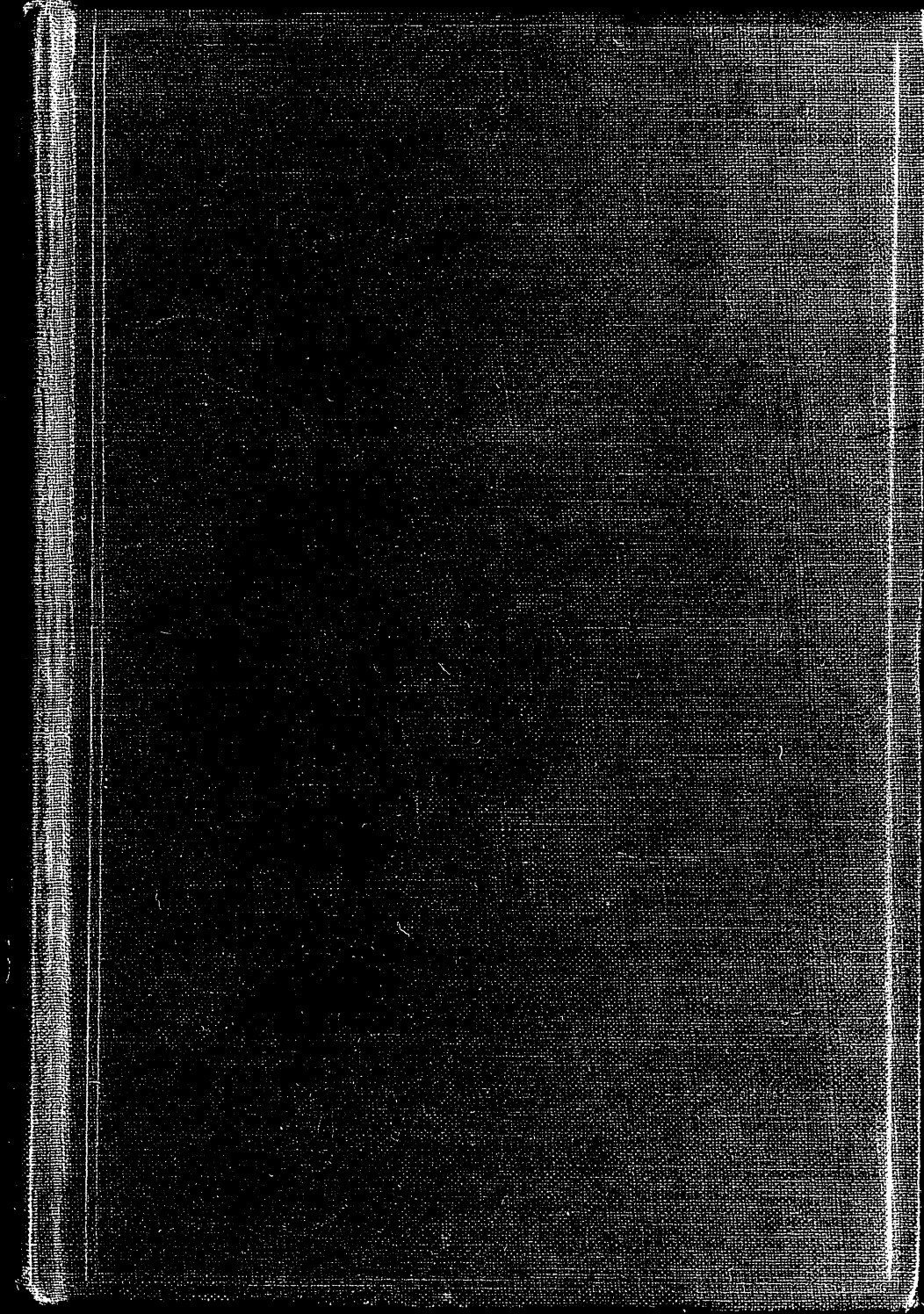




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THE INDISPENSABLE SOUL



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THE INDISPENSABLE SOUL

BY
WILLIAM H. CRAWSHAW

NEW YORK
THE MACMILLAN COMPANY
1931

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I

RELATIVITY

CHAPTER I

MECHANISM OR SOUL?

WHEN Bunyan's Pilgrim was passing through the Valley of Humiliation on his way to the Celestial City, there met him a certain "foul fiend" named Apollyon. "Then Apollyon straddled quite over the whole breadth of the way, and said, 'Prepare thyself to die; for I swear by my infernal den that thou shalt go no further; here will I spill thy soul.'" If the immortal dreamer of Bedford could have beheld in prophetic vision the progress of the modern pilgrim, he might still have found a certain aptness in his allegory. Every age has its Apollyon, the Destroyer, enemy of the soul. Our enemy is the earth-born giant of materialism. He, too, straddles "quite over the whole breadth of the way," threatening to spill our souls in more scientific fashion by proving that we have no souls. If he could prevail in his argument, his victory would be a conclusive one; for surely the fatal and final way to destroy the soul would be to convince the soul of its own nothingness and thus make the soul destroy itself.

The loud and arrogant challenge is uttered with a confident assurance that seems to admit of no reply. The intellectual champions are bowing the knee or running away. Yet is there any need to be quite so certain

of defeat? Perhaps, after all, truth is on the other side. The giant is indeed formidable; but is it so sure that he is altogether invincible? Perhaps—even if the swords and the spears should fail—one might, like the shepherd boy with another giant, go down to the brook and find a few smooth stones and sling them with good will and at a venture. One could hardly hope to smite Goliath on the forehead, but maybe one could rattle a pebble or two against his armor.

The plain man does not often trouble to inquire about the soul. He rather takes the soul for granted and goes on about his business. When it dawns upon him that the very existence of the soul is being challenged or even positively denied, he is likely to be startled but incredulous. It has never occurred to him to doubt that he had a soul and he does not quite see how it is possible for him to be getting along without one. The soul really seems indispensable to the business of living—at least to the business of human living. When he is given to understand what this loss of the soul implies—that personality and mind and even consciousness are all wiped out with the soul, that man is nothing more than an ingenious piece of mechanism—such a doctrine seems absurd and preposterous. When he is further told that the doctrine is firmly based on the findings of modern science, he is likely to be amazed and dumbfounded. If all these things be true, it looks as if nothing could save his whole inner life from impending extinction.

To ask man to doubt his own soul is like asking him

to doubt the evidence of his own most intimate experience and of his own most immediate knowledge. How can he doubt what he feels and knows with every impulse of his own being? Yet man does not want to follow false fires and must be content to walk by whatever light there may be. He respects the doctors of philosophy and the doctors of science—especially the doctors of science; and it is in the name of philosophy and science—especially of science—that this denial of the soul is being proclaimed. He believes that these learned men would not willingly mislead him, and surely they must know, if anybody knows. Yet how can they be right? He dimly feels that there must be some inadequacy in their facts or some flaw in their argument, but he cannot put his finger upon the place. So he stands uncertain, not able to indulge his hope, not willing to embrace his fear.

Is this negation of the soul the only and the final word of science, and does philosophy positively endorse the verdict? Clearly not. Strictly speaking, science as such has nothing whatever to say about the soul. Inferences may be drawn from scientific facts and principles, but for such inferences science itself is not responsible. No one, therefore, has a right to invoke the authority of science either for or against the soul. Philosophy does have to speak about the soul, but what it has to say will depend upon the type of philosophy involved. As a matter of fact, there is quite as much testimony for the soul as there is against it. The real antagonist of the soul, then, is not science or philosophy but that

particular kind of philosophy which is called materialistic.

Materialism is of course entitled to draw from philosophy and science such material as it may need for the purposes of its own legitimate argument, but the argument must rely upon its own cogency and not upon any appeal to the supposed authority of science or philosophy. When this much is clearly understood, the case appears a little more hopeful for the soul. It has at least a fighting chance. This is not to say that materialism is a weak antagonist. On the contrary, its argument is a very powerful one and is delivered with masterful assurance. Its standing-ground is so solid and definite as to seem impregnable. Whatever its strength, however, it must stand on its own feet and rely upon the merit of its own cause. It cannot overwhelm us with, "Thus saith science" or "Thus saith philosophy."

The plain man would be sorry to lose his soul; but if that is what must be, he would like to face the facts, cut his losses and find out what assets are left. On the one hand, he shrinks from dark conclusions based on subtle reasonings. On the other hand, if he be an honest and open-minded man, he does not wish to evade the real issue. Neither does he wish to act in blind ignorance or in foolish denial of any valid conclusions which may have been reached by the great masters of knowledge. He would seek to be guided by deep respect for all true learning and by frank recognition of the reliability of human knowledge and the

integrity of human thought. He does not wish to be an ostrich, hiding his head in the sand lest he should see something that he does not want to see. Truth is truth. There is no power in the will of man to alter it. It is best that we should know the truth. Honest and intelligent men should be willing to accept the truth, whatever it may prove to be.

If we wish to inquire about the soul, we must do so within the limits of present knowledge. Modern knowledge may or may not have confirmed or denied the soul—that is what we wish to discover—but it has at least vastly altered the conditions of our thinking. Ideas of the soul that would once have seemed almost self-evident now appear childish and fanciful. Doctrines that once rested upon the best knowledge and thought of their age have fallen together with their foundations. The old forms of faith are gone. The lover of truth can no longer find a refuge in any outworn doctrine or conception of the soul, whether theological or philosophical or psychological. Yet it may be that the soul itself has not vanished beyond recall. If it be indeed a reality, it will assuredly reveal itself again in some shape recognizable by modern mind. Meanwhile, the lover of truth must face boldly and frankly the urgent question, What may we reasonably think of the soul in the light of modern knowledge?

The materialist tells us very plainly that we ought not to think of the soul at all—it does not exist. What we take to be the manifestations of soul are simply the results of purely physical causes. They are so much

mechanics, so much chemistry, so much biology, so much physiology. There are no really psychic phenomena; there are only stimuli and reflexes. Science has surveyed the whole world from atom to star and beyond them both; it has found nowhere a particle of evidence for anything but material causes and material processes; it has found that such causes and processes are amply sufficient to account for all the phenomena that present themselves for consideration. Why continue to talk about soul when we can examine the physical machine and see precisely how it works, when we can trace the relation of cause and effect as surely as we can in the case of a heat or chemical or electrical engine? The living engine is somewhat more complicated, but at bottom the principles of its operation are much the same.

So runs the argument. It certainly sounds plausible. It is appalling in its simplicity, in its comprehensiveness, in its assurance, in its seeming finality. If it is justified, if no vital considerations have been left out of the account, then there is only one reasonable conclusion. Man who has thought himself to be an intelligent soul, who has believed that he was in part the author of his own destiny, is only a helpless bubble on the stream of matter, a bubble which rises and shines and bursts and dissolves again into its original material elements. The very starkness of such a conclusion gives us pause; it seems like a reduction to absurdity. Yet, after all, if it is so, it is so.

Is it true that science has indeed surveyed the whole

world? It certainly does not profess to do so. It is probably true that science has found no evidence for anything more than the material, but is it looking for anything more? One is not likely to find anything unless he is looking for it and looking for it where it is. Has science found that material causes and processes are adequate to account for everything? It has not declared any such finding and to do so would be beyond its province. Indeed, is not this the very question at issue between materialism and the soul? Science declares nothing except that, in its researches thus far, it has found only matter. To such negative testimony, for what it may be worth, materialism is entitled, but not to anything more. But here is the idea of soul and here are the phenomena associated with it. If they are what they seem to be, then they are more than matter. If they are not what they seem to be, then it must be shown by good and sufficient evidence how they are not and why they are not.

What do the psychologists have to say about this situation? It is their professed business to study the psyche, and if there is no psyche, what are they going to study? They would be in the curious position of trying to construct a separate science on nothing at all. Surely we might reasonably expect that they would come to our rescue and to the defense of their own unique discipline. Some of them do. There are still psychologists who believe in the psyche and who are earnestly endeavoring to study it for what it appears to be. This would really seem the most hopeful way

to follow, but of course it has its very serious limitations. The data are hard to capture and introspection is an uncertain process. Even with the finest sympathy and the keenest insight, it is usually the richest and the highest data that will most easily escape. Then, too, there is the constant temptation to value most the data which can most readily be weighed and measured. This is in accordance with the scientific temper of the age. From one point of view, this endeavor to make psychology a science is as admirable as it is logical. But there is danger in trying to treat scientifically a subject which is not altogether amenable to scientific methods. We may arrive at a "science falsely so-called." Psychology is a science, but it is more than a science.

Many psychologists are on the side of materialism as against the soul. The extremists among them have frankly abandoned all belief in the psyche or in psychic phenomena. They have abandoned the attempt to construct a science of psychology as that has been commonly understood or as its name implies. They reject the very names, psychology and psychologist, and prefer to call their science behaviorism and themselves behaviorists. For them, there is no psychic being; there is only the way in which living organisms behave. The soul is an illusion, mind is a fiction, "thought is the action of language mechanisms." They do not tell us what it is that has the illusion, what it is that creates the fiction, how a jerking of the vocal cords can involve the miracle of thought. Nevertheless, this attempt to

construct a science of behavior is logical enough from their point of view and even from ours. If there is no soul, the objective behavior of living creatures is none the less a worthy and interesting subject for examination. It may prove to be a very profitable one and may lead to some rich results. Only, one could wish that the behaviorists were less contemptuous toward the true psychologists, less cocksure that theirs is the only possible line. Maybe after all there will be need of something more than mechanism to explain all behavior.

To assume as a point of departure that mechanism is a sufficient cause is to approach the matter by the method of the physicist and the chemist rather than by that of the psychologist. For physics or chemistry, matter is all that comes under consideration, and therefore mechanism is enough; the soul is simply not visible, it lies beyond the horizon. Psychology, however, professes to consider, not merely the problem of matter, but the problem of life and of thought. From the point of view of psychology, one would think that the soul ought at least to be inquired for. To dismiss it at the very beginning, as a preliminary to research, seems very much like begging the whole question.

Such questions are easily begged. Most of us, scientists and laymen alike, are chiefly attentive to outward fact, and therefore we have in that realm positive and assured convictions. Concrete fact is not easily to be denied. It makes definite and striking impression and tends to obscure our view of anything less solid and tangible. We may even become so obsessed with

the importance and value of facts that we shall miss the truth that lies within or beyond them—fail to see the wood because of the trees. On the other hand, we too seldom turn absorbed attention inward to apprehend and understand the soul, and therefore our convictions here are less definite and less assured. Still more seldom do we turn absorbed attention toward whatever spiritual reality may lie beyond matter and beyond self, and therefore faith and the objects of faith seem uncertain things and vague. We see only what we look for. The great masters of human nature—Shakespeare, say, or Dostoevsky—have no doubts about the soul. The great mystics and the great poets have no doubts about spiritual reality. These also see what they look for.

It is passing strange that the psychologists seem to have so little to learn from the great novelists and dramatists and poets and seers while they have so much to learn from the chemist and the biologist and the physiologist. Psychology looks two ways—toward the flesh and toward the spirit—and has to consider the vital union of two natures in one. It can undoubtedly learn much from the men who are familiar with matter. Could it not also learn much from the men who are familiar with spirit? They are men endowed with faculties that reach out far beyond ordinary human faculty and penetrate deeper into the mysterious recesses of human nature. They are men of great intellectual power, great emotional capacity, great imagination, great insight, great intuition. They are men of genius. Surely such men have a right to be

listened to in the courts of psychology—even of scientific psychology. If all these points of view were appreciated and accepted, the psychologist could not allow himself to become simply a scientist but would have to recognize his work as having a wider range. Neither could he associate himself with materialism in utter denial of the soul.

This sweeping denial of the soul amounts to a denial of all immaterial values. This is strange doctrine from the point of view of the past and it is likely to seem even stranger in the days to come. Materialism denies the soul because it is supposed to be immaterial and because science is said to have discovered none but material realities. Yet right now matter is trembling on the verge of immateriality and threatens to dissolve. We hear much in these days about the electrical constitution of matter, but who will tell us what that really means or what electricity really is? We know it simply as a kind of energy, but is energy, in the last analysis, material or immaterial? The basis of matter is no longer to be found in material particles called atoms but in centers of force called protons and electrons. Whither is this leading us? The physicist himself will be the first to grant and even to assert that nobody knows what matter is, but only what it does. Surely as much as that can be said of the soul. It also is a center of energy and it produces characteristic results different from those of any known material entity.

Still another point is significant. Science needs the ether in order to rationalize its own laws, and so it

does not hesitate to postulate the ether. But the ether is at the same time declared to be nonmaterial. Therefore science sets the example of assuming for its own purposes a nonmaterial entity whose existence it cannot prove, while at the same time, in the name of science, materialism declares that an immaterial soul is unbelievable. When this argument is pressed, the answer is sometimes made that, when the physicist describes the ether as nonmaterial, he does not really mean that it is immaterial, but merely that it is imponderable. That is strange logic; it sounds very much like a quibble or a contradiction in terms. It seems like saying that the ether is nonmaterial in the sense that it possesses none of the known properties of matter, but not immaterial because immateriality would be equivalent to nonexistence. That apparently begs the whole question. The juggle with words is a fruitless one. If the ether is nonmaterial, it is something else than material; for nonmateriality is nothing in itself, but only a negation of materiality. What is that something else? The immaterial would be one possible alternative. What is the other? Can there be any other? Has it elsewhere entered into the mind of man to conceive any positive reality which is neither material nor immaterial?

The fact is that we do not very well know what we mean when we speak of material and immaterial entities. The distinction may after all be an illusory one and may have no fundamental importance. If the ether is so little material that it possesses none of the properties of matter, so little material that it has to be

described as nonmaterial, then that is at least immateriality enough for the purpose. On the other hand, if the soul is immaterial only in the same sense as the ether or even as the proton and electron, that also may be enough for the purpose. The ether and the proton and electron might almost be described as immaterial matter. If somewhat the same description might be applied to the soul, then the soul is matter that has none of the known properties of matter, it is matter that is simply a center of radiant energy, it is furthermore matter that thinks and purposes and aspires. That is enough.

"Science does not need the hypothesis of the soul; therefore there is no reason to believe in the soul." Such seems to be the reasoning and the conclusion of the materialist and mechanist. "Science does need the hypothesis of the ether; therefore there is reason to believe in the ether." So he might also declare. That seems at any rate to be the logic of his attitude. This sounds marvelously like faith, believing what it wants to believe and needs to believe. Is that not what all men practically do, scientists and others? All men believe—something—beyond the bounds of knowledge or of proof. All men practically believe many things which they theoretically deny and practically deny many things which they theoretically believe. If we feel the need of a soul, we believe in the soul, or the mind, or the consciousness. If we feel the need of God, we believe in God. If we feel the need of immortality, we believe in immortality. If we feel the need of the ether,

we believe in the ether; and if we should no longer feel the need of it, we should doubtless cease to believe in it. Instinctively we feel that what ought to be must be.

There is nothing really strange about all this. There is certainly nothing unnatural or improper about it. That is the way man is made. He is not a mere logic-machine, nor is he paralyzed when he is called upon—as he not infrequently is—to act or to think without full knowledge. Knowledge strengthens and enlarges and assures him, but it does not altogether condition him. Reason is not his only guide and he is constantly reminded that reason alone is not adequate to the interpretation of himself or the world in which he lives. He is impelled to believe as well as to reason. So a man's faith is in some sense a measure of himself. It is of course a measure of other things as well—of his heredity, his environment, his social heritage, his education, for instance. It may prove to be one measure of the reality of the universe, a discoverer of truth, as natural and legitimate and useful a function of man's personality as is reason or observation or experiment. This is particularly true in the search for the soul.

Faith, like all other human functions, has its limitations and makes its mistakes. It is by no means infallible any more than are other human powers. Nevertheless it serves, even as they serve. It coöperates with them in helping us to approximate to the truth which is as yet beyond all our powers. It is, if we may say so, a sort of sixth sense which supplements our other senses

without supplanting them, or perhaps rather a refined harmony of all our capabilities, man's whole nature on tiptoe and astrain. To set it aside in the name of reason is to deprive man of that very gift which is the hallmark of the rarest and finest natures, which is perhaps the latest and most exquisite flower of his development thus far, the gift of seeing beyond sight, of hearing beyond hearing, of sensing beyond sense, of thinking beyond thought.

We have seen that even the scientist does, in spite of himself and in spite of his theories on the matter, make use of this gift when there is due occasion and when nothing else will serve. He need not be ashamed to do so; for he is following a perfectly normal process, and it helps him even in the pursuit of scientific truth. We have seen that even the scientist is forced to some recognition of immaterial—or at least nonmaterial—being. We have seen also that he is sometimes forced to believe beyond the bounds of knowledge. Must he not go even further? Is the materialistic scientist indeed right in supposing that, even in the field of science, he does not need the hypothesis of the soul—of the mind? Does not science in fact need the hypothesis of the soul quite as much as it needs the hypothesis of the ether? Are not things actually done in the world which only a soul could do?

Professor Eddington illustrates the point by supposing the simple case of a man who takes a new pack of cards and proceeds to shuffle them. He says: "All trace of the original systematic order disappears. The

order will never come back however long you shuffle." Then he adds significantly: "*You* can sort out the cards into their original order if you like." That tells the whole story. There is something in the world—call it the soul or what you will—which can accomplish easily and as a matter of course things which unaided mechanical processes cannot accomplish at all. Professor Eddington says further: "Shuffling is the only thing which nature cannot undo." Nature of course can undo order; that is to say, it can shuffle. A pack of cards dropped onto the floor would be shuffled by natural forces. But nature cannot restore the order which it has destroyed. But mind can restore it, mind can unshuffle. Man can even unshuffle himself; that is to say, he can within limits restore broken order in his own being. What then of the systematic order which we seem to observe in nature? We do not know how it came there. Is it not a fair and reasonable inference that it was created by mind even as it is discovered by mind?

We have been raising the question whether science, without the soul, can explain nature. A still closer question is this: Can science, without the aid of the soul, explain itself? Observation implies an observer, investigation implies an investigator, knowledge implies a knower, science implies a scientist. What is it that observes, that knows? What is it that frames hypotheses? What is it that investigates and experiments and draws conclusions? Methods of examination, mechanical means of automatic registration, instruments

of precision, seem to count for much in the way of discovery; but they are, after all, only extensions and enlargements of the scientist himself. Microscopes and telescopes, for instance, reveal facts beyond the reach of man's unaided vision; but they did not invent themselves, they do not operate themselves, they do not interpret themselves, and they can never acquire an independent validity. They are devised and constructed and guided and controlled by something beyond themselves and prior to themselves. There is always the man behind the instrument. So the scientist seems tacitly to assume mind—or something equivalent to mind—even while he denies it. The very denial is in itself an assumption, for nothing but mind would be able to deny mind. For at least an inappreciable moment, he must at some time have been aware of "mind," even though he has proceeded at once to shut the door upon it and to exclude it permanently from that "consciousness" which also he will not concede to have any independent existence. "He is like unto a man beholding his natural face in a glass; for he beholdeth himself, and goeth his way, and straightway forgetteth what manner of man he was."

The purely materialistic scientist—if indeed there were any such individual—would be like a man carrying a lantern in the darkness and yet not able to discover any such thing as light. He would see many other things in the obscurity, but would proclaim that light was nowhere to be found. We might say to him, in our naïve simplicity: "Man, look at your lantern;

there is the light that makes your darkness visible, the light without which you could not see anything else." "Yes," he might reply, "now that you speak of it, I do indeed seem to have a lantern and a sort of light. But this only puzzles me the more. I have heard much talk of eyes and have been told that eyes are necessary to vision. Many other things I have been able to see, but surely eyes must be an illusion or a fiction." We could only answer him: "Man, eyes are what you are seeing with. Without them there would be no light and no vision." The fable is of course but a childish one; yet it suggests a real parallel. Not less childish would it be for materialistic science to ignore the light which is perception and intelligence, the lantern which is man, the eye which is mind or soul. These alone make science possible; without them, science could neither deny nor affirm. It could not even begin to know.

Our fathers and our grandfathers used to be concerned about saving their souls. They did not think to question the soul's existence. What troubles the modern man is the doubt whether he has any soul to save. That doubt paralyzes him for high action. Does it not in truth paralyze him for all action above the level of the brutes? Without the soul, we cannot adequately act, even as we cannot adequately know. Our concern is not so much to save our souls as to use our souls. We need them; they are indispensable. If they did not exist, we should have to invent them—like the ether. The behaviorist may try to convince us that mind

is a fiction. The real fiction is that even a behaviorist can do anything without mind.

Without the soul, we cannot interpret nature. Even more evident is it that to understand man we must begin with the soul. To those who believe in it, the soul is the fundamental axiom of all knowledge and therefore of all science, of all philosophy, of all human life. It is the only key which can unlock for man the riddle of the world. That of course is a large assumption. Is it justified? Of course, if we are to take even the first steps toward knowledge, we must begin by making some assumption. There must be some sort of ultimate conviction. We cannot start from nothing. There cannot even be any mathematics without original axioms; and an axiom, by its very nature, is something which cannot be proved but which is assumed as self-evident. The validity of all our knowledge must finally depend upon the validity of what it first assumes. In a word, the difference between materialist and idealist is at bottom a difference as to the starting-point. If they could agree as to the first step, they would not be so very far apart at the end, for the first step determines the direction. Where, then, should we begin? Can there really be any doubt, at least as between the two extremes of "mind" and "matter"? We must begin with one or the other? Which is more axiomatic?

The materialist begins with assuming the reality of matter. That seems to him the safer choice. The result is that he never gets beyond matter, for matter can

never comprehend mind. He has forgotten or ignored, however, the fact that in postulating matter he has already tacitly assumed mind or its equivalent. He has used mind to deny mind. Then, having assumed that mind does not exist and that matter does, he arrives at the startling conclusion that the study of matter does not reveal any such thing as mind. From that starting-point would it have been possible to arrive at any different conclusion? The materialist has really gone around the circle, reaching as a conclusion the very conviction with which he started, using mind, however, at every point of the process by which he comes to the denial of mind.

The materialist further professes to find that there is nowhere any need for mind and that mechanism proves amply sufficient to explain all phenomena. Doubtless it does, all except the explainer. If serious endeavor were made to explain the explainer, it might tend to disturb the complacent perfection of the theory; but the explainer was carefully shut out before the study began. There would really seem to be something seriously wrong with this materialistic argument. Either mind is or it is not. If it is not, then why not exclude it altogether, not only at the beginning and at the end of investigation but everywhere between? The answer of course is that such complete exclusion would be altogether impossible, not even conceivable. The mind cannot be excluded, but it can apparently be disregarded. It is a phenomenon more than passing strange that the human mind can thus be made to ignore its

own obvious participation in a process to which it is none the less absolutely essential. Without that something which we call "mind"—no more to be defined, of course, than what we call "matter"—there can be no effort toward knowledge and therefore no science, no philosophy, not even materialistic philosophy.

Matter does not seem to offer us the safest or the most promising point of departure in the search for knowledge. It would seem, then, that we ought to begin at the other end, for that is apparently the only alternative. There are certain philosophers who begin with mind, or with spirit, and who arrive at the conclusion that matter does not exist. So flatly may philosophies contradict one another. It is clear enough that to begin with matter alone leaves us hopeless to discover mind; for it practically forces us to ignore mind at the beginning and to deny mind at the end. But the reverse is not necessarily true. To begin with mind alone may leave the question of matter an open one to be decided in the light of further evidence or thought. In the one case, we are beginning with the lower and are seeking to find a higher. The higher is transcendent and incomprehensible to the lower, and the lower cannot help us to conceive the higher except in terms of its own mechanical nature. In the other case, we are beginning with the higher and are seeking to find a lower. The lower may prove to be a mere shadow of the higher or else it may prove to be an independent reality which the higher can understand and explain. Whichever be true, the higher has access

to the lower as the lower does not have access to the higher.

Mind can think matter, although matter cannot think mind. This may mean that matter is merely the thought of mind, or it may mean that mind is simply the knower and interpreter of matter. In any case, to begin with mind is to choose the more hopeful road to fullness of knowledge. It would seem to follow that we shall have the best chance of understanding man if we begin by conceiving him not as mechanism but as soul.

CHAPTER II

HIGHER VALUES

MANY things of a mechanical order nature can do alone. Some things of a higher order nature can do alone. Apparently without the help of thought, certainly without the help of human thought, nature can organize. On a lower level, it organizes in the atom, the molecule, the crystal, the star, the astronomical system. On a higher level, it can produce organisms—plant, fish, bird, beast, man. Nature may or may not have produced these higher creations without the help of thought; but it certainly has not done so without involving a new and important factor, the element of life. Here matter becomes in some sense self-determining and seems in some degree to have freed itself from the strictly mechanical system. At any rate, here is something new to be explained, and the explanation should take full account of the new factor and the new phenomena. We cannot as a matter of course assume the mechanical view. The evident appearance of things is otherwise.

Organism, then, involves life, and life must be interpreted in its own terms rather than in terms of inanimate matter. Whether thought is also necessarily involved in organism is at best a doubtful question.

Apparently not, but no one can surely say whether at least the germ of thought may or may not be inherent in all life. If not, then no one can surely say where, in the development of life, thought first begins. Neither can it be told whether thought arises from within life or enters into it from without. We know of a surety that thought is here and is associated with life, but no man can tell whence it cometh or whither it goeth. The behaviorist, by his eager study of lower animals, would seem to imply that there is no psychological gulf fixed between animal and man. He is probably right, and that makes his quest a promising one. In any case, when we come to man, we do have the three great elements—matter, life, mind. They unite to form the human organism, and their union is characteristic of the human personality.

The question that now arises is whether the problem of man does not take on a very different aspect when we rise to the level of higher functions and values. Let us bear in mind that there are now three things to explain—matter, life, mind. As to the first of these, the materialist will of course have no difficulty. When life and mind have to be taken into the account, the case is very different. These certainly do not appear to be of a mechanical character or likely to be due to purely mechanical causes. The materialist has only one effective resource. He denies the independent existence of mind and practically also of life. Whether they are independent or dependent, they at least introduce new factors into the problem, and these

demand consideration on their own merits. Whatever may be the ultimate judgment about them, they certainly make it harder to reduce the world to mechanism.

In the study of life, the materialist begins to meet with serious difficulties. One of these is that he comes into conflict with the vitalist. Here he meets with the counter claim that the functions and phenomena of life are due to a special vital principle rather than to physical or chemical causes. Still he has good fighting ground. Physics and chemistry will go a long way toward explaining the phenomena of life, and it is not easy to find any positive evidence for the existence of an independent vital principle. Such a principle by its very nature eludes search. The lower the forms of life, the more plausible the case of the materialist against the vitalist can be made to appear. In the higher organisms, the situation becomes more complex, more intricate, more subtle; and it becomes ever harder to avoid the conviction that mechanical and chemical processes are not in themselves sufficient and that some deeper principle of life must be working to guide their operation. They do not elsewhere work in any such ways or to any such results. This conviction grows all the stronger when we consider that life involves not only results but purposes. Matter is driven blindly along to ends unforeseen. Life works toward the creation of organs that will serve its needs and realize its aims.

When we rise definitely to the human level and have

to take account not only of life but of thought, the difficulties become much greater. Yet the materialist still speaks with assurance. Mechanism has served so well in giving more or less adequate interpretations of material and vital phenomena that he has come to have a high degree of confidence in its universal efficiency. He believes that it is adequate to interpret even all the phenomena of human personality. By studies of limited range within the field of psychology, this confidence is increased and almost seems to be justified. The mechanistic theory may seem to work well enough so long as the mechanist confines himself to what might be called the psychology of lower animals. So long, even, as research is limited to a rudimentary human psychology—what might be called the animal psychology of man—it might pass with little challenge.

Undoubtedly the study of animal "behavior," even from a purely mechanistic point of view, may teach us much of man, so far as man resembles the other animals. Undoubtedly the study of human psychology in its lower and simpler aspects is fundamentally important and a useful or even necessary preliminary for a higher research. The mechanistic theory as applied to human psychology may serve to interpret the hungers and the lusts and the fears, the habits and instincts and passions. It may even venture so far as to make the daring conjecture that thought is merely vocal or sub-vocal speech, "the action of language mechanisms." It is interesting to note, however, that the author of this startling and revolutionary definition immediately pro-

ceeds to add, in a footnote, that there is as yet very little experimental evidence for this theory. One can hardly help wondering whether it would not have been more "scientific" to reserve this psychological revelation until there was somewhat more than a little evidence for it. Still, it may be granted ungrudgingly that all genuine evidence in this field should be welcome, because it may at least shed some light upon the elementary principles of human nature.

We cannot, however, be content to stop with the exploration of this lower field. All that we could conceivably find there would at the best afford but a meager view of man. We are, of course, greatly interested in all those impulses and qualities and characteristics which man shares with the lower animals; but we are immensely more interested in what makes him different from them. Certainly it is in this higher field, and not in the lower, that we are impelled to raise the question of the soul. It is there and not elsewhere that the issue will have to be tried and determined. In the meantime, the materialist has no right to dismiss the soul in final and peremptory fashion until he has brought his mechanistic theory to the test of explaining all that man is—not only what he is in common with the brute, but what he is beyond the brute.

When the materialists attempt to explain away the soul, do they, one wonders, sufficiently realize the magnitude of the job? Do they realize how much they must explain away with it or else explain on other grounds? What of all those higher qualities which we

associate with humanity? What, for instance, of the virtues and the ideals and the aspirations and the intellectual powers? Is it a reasonable proposal to resolve these and such as these into nothing more than mere motions of matter? Is thought nothing more than physiological action and love nothing more than chemical affinity? If so, what sort of thought or of love must it be that can be so described? We must not allow these higher qualities of man to be degraded to an animal level in order to make materialistic theory seem plausible. We must insist on their superior nature. Such capabilities as these make up what we call human personality, human character. Here we touch the highest value that we know. Can we believe that personality, with all that it includes and implies, is sprung from the dust of purely material causes?

These higher capabilities raise man immeasurably above the level of all other animals; they create a great gulf between him and them; they put him in a class by himself. Especially do they distinguish the exceptional individuals who rise above their fellows and reveal some of the higher possibilities of human development. Man is not to be judged by his lowest specimens alone, or even by his average specimens; he can be adequately judged and interpreted only by taking into the account all the possibilities that his nature may reveal. The behaviorist does not select for study especially gifted animals. He probably does not need to do so, for doubtless the study of a sufficient number of normal individuals will reveal the characteristic be-

havior of their class. This is only in part true of man. The study of normal individuals will doubtless show types and averages of human behavior. It may give much useful information concerning the qualities which are common to all men; but the qualities thus disclosed will necessarily be of a lower order, the basic and elementary qualities, so to say, of human nature. The study of them is likely to have a positive and practical value, but it must leave much still to be discovered. There are greater differences between individual men than there are between individual animals; and it is these very differences which are most significant and least capable of being interpreted on purely mechanistic principles. It is these especially which seem to have a spiritual quality and to call for the hypothesis of the soul.

These more individual and apparently more spiritual qualities tend to elude investigation and are hard to bring within the bounds of positive knowledge. Science considers only what can in some way be measured. Measurement implies some sort of standard. Materialism can find no standard by which to measure man's highest qualities except the material standard already familiar in other fields; and inasmuch as these qualities cannot be denied, they must be reduced to the level of material things in order that such a standard may apply. For the soul, materialism can find no standard of measurement at all, and therefore the soul must be utterly wiped out. This is not a fair mode of procedure. Science is perfectly justified in confining its

attention to what can be measured, but it is not justified in depreciating the value or in denying the existence of what cannot be measured by its particular standards. It is only the measurable that can be measured; but there may be reality which is not measurable. If so, it must be interpreted in some other way. This may rule it out of science, but it does not necessarily rule it out of existence.

Behaviorism may prefer to study animals or average men rather than poets or prophets or philosophers, because the former yield themselves more readily to study by experimental methods; but the latter exist, and they cannot be left out of the account when we are seeking for a reasonable interpretation of man. Genius, character, personality, are great facts of human life, and the question is whether we can give any plausible explanation of them as a product of mechanism or of chemistry. The cause and the effect do not seem to be commensurate with each other. Nothing that we otherwise know of these purely material forces would tend to show that they are adequate to produce any such results. We do not elsewhere see machines creating ideas or chemical reactions creating thought. Man is a machine, if we choose to say so, a marvelous machine; but the great marvel of him is that he seems to transcend his machinery. His thought is in some way associated with his mechanism, but it also seems to use that mechanism for its own ends.

The fuller interpretation of man must not lose sight of the fact that he is not only a personal animal, but

also preëminently a social animal. This may not at first sight seem to be genuinely distinctive of man. It may be suggested that there are other social animals. The life of the bee, for instance, presents us with the fascinating spectacle of a social order which shows a high degree of organization and coöperation. It is practically perfect—of its kind. If the human social order were of the same kind, it might seem reasonable to grant that man as a social being could very well be interpreted in terms of mechanism. The life of the bee and the ant seems to be automatic. It may not be altogether so, but that might be accepted as close enough to the fact. The social life of man certainly does not seem to be automatic. It takes a great variety of forms and these seem to be largely determined by what we know as individual will and purpose.

If we are to accept for man the sort of explanation that might hold good in the case of the bee, it can only be after sufficient proof and demonstration. The unmistakable differences between the two kinds of social life are so great, both in amount and in quality, that the same sort of explanation can hardly be regarded as applicable. Simply because we are dealing in each case with a social order, it does not by any means follow that the psychological phenomena are the same. Indeed, not even the "behavior" is the same. There is all the difference between instinct and reason—whatever that difference may be. It might be fairly argued that instinct and reason are at bottom the same or that the one is the germ of the other. Even if this were so,

it would not alter the case in any appreciable degree. Nature has a habit of showing that accumulating differences in degree may in the long run become to all intents and purposes a difference in kind. This is especially true in the development of life and perhaps chiefly in the field covered by psychology. The bee, for instance, builds its hexagonal cells on strictly mathematical principles but the bee is not, therefore, a mathematician. The bee constructs; the mathematician knows why he constructs. When instinct becomes reason, it has become something else.

The character of any particular social life is evidently determined by the character of the individuals that make up the society. Human society is different from any other because it is made up of men and women rather than of bees or ants or what not. In this sort of a society, we have to account not merely for automatic and instinctive coöperation but for plans and purposes and social ideals. We have to account for organization in a myriad forms—political, industrial, educational, religious, and what not. We have to account for the loves and the heroisms and the devotions, for their opposites, for all the multitudinous phenomena—obvious and subtle, simple and complex—that make up man's social life.

It is spoken of as the social organism, but it is not truly an organism. It is more properly to be called an organization, and man is the organizer. We do not imply, of course, that man made all the materials or furnished all the plans for his social structure; but

when all due limitations are made, there is everywhere ample evidence of his organizing ability. The social organization is in a very real sense and in a very large measure the product of man's initiative and voluntary effort. He is a being endowed with social aptitudes and displaying social qualities. This also we must take into the account when we consider whether man is to be adequately explained on any lower terms than those which are implied by the soul.

There is another region where man seems to be possessed of powers peculiar to himself—powers which remove him still further from any possible companionship or rivalry on the part of other animals. It is the region of æsthetic values and aptitudes. What are we to say of man as a self-conscious lover of beauty and as a self-conscious maker of beauty? What are we to say of man as a being capable of molding into beautiful shapes and sounds the creatures of his imagination? Here are opened up to our thought the wonderful realms of music and poetry and art. Can all these things really be regarded as a product of chemistry or as the resultant of purely mechanical operations? Can they be regarded as involving nothing more than what the lower animals feel and do? One cannot say, of course, that the germs of æsthetic feeling and even of æsthetic creation might not be discoverable in the lower animals. Birds make music, birds and insects display fine colors, animals sometimes manifest a certain amount of constructive skill. But are these, after all, really the same thing as man's artistic capacity?

Have we not again all the difference that lies between animal instinct and human reason?

Sweet sounds, bright colors, constructive skill—these are but the raw materials of art. Art itself is something vastly more than these. Some one—evidently speaking in a materialistic sense—has said that art consists in changing the places of things. The painter, for instance, gets his colors from various sources and daubs them on the canvas; the architect gets his stone from the quarry and puts it into walls; the poet takes words from the dictionary, and arranges them in metrical lines. Such a description of art is literally true; but it is surely only a very small and insignificant part of the whole truth. It hardly enlightens us more than the saying that music is expensive noise. That saying may also sound like literal truth to the person who cannot distinguish one tune from another; but the real lover and appreciator of music knows that the "concord of sweet sounds" opens up to him a world of exquisite pleasure. It is not merely a question of the fine and true ear which can distinguish and appreciate delicate subtleties of sound; it is much more a question of emotional and spiritual appreciation. One note added to three may become, as Browning's Abt Vogler says, "not a fourth sound, but a star."

Much the same might be said of man's delight in the beauty of form and color. Such delight may seem meaningless to one who lacks æsthetic taste; but the lover of art knows that it is a part of the highest reality of life, of the most refined and sensitive human nature.

In poetry, we find a combination of art and music, and these are not seldom united with a high degree of intellectual power. A great poem is probably the noblest achievement of the human mind. It calls forth all man's powers. Just for that reason, the literal and practical mind is likely to miss its transcendent values. If such a mind could really appreciate such values, it would hesitate to declare that they are nothing more than the product of a physical machine or even of an animal instinct. If matter really can produce both instinct in the beast and reason in man, then the whole discussion becomes merely a question of terms. If matter can think as a great poet thinks, then it is more than either the materialist or the idealist or anybody else has supposed. In such a case, matter might just as well be called soul, for it is equivalent to soul.

When the materialist makes his claim that the functions of soul can just as well be attributed to matter, does he really appreciate how much he is claiming? Is he not practically ignoring the existence—or at least degrading the values—of music, art, poetry, beauty? The love of beauty is perhaps the rarest flower of human nature, the faculty of man most closely allied with refinement of mind and delicacy of taste. It is not merely a means to an end; it is in itself one of the great ends of life—"its own excuse for being." In trying to account for man, it must not be ignored or depreciated. If the materialist is to make good his claim that mechanism offers a sufficient explanation, then one of the things that he must show is that mechanism ac-

counts for the sense of beauty and for all that it involves or implies. He must show furthermore that it accounts for imagination. That is probably the greatest of all man's powers. Through imagination alone does he rise high enough to become an originator and a creator. It makes him a musician or an artist or a poet; but it also makes him a builder of bridges and engines and ships, a builder of empires and civilizations. It creates the instruments which he uses; it creates the symbols for his thought; it creates the ideals by which he lives.

We must not fail to take note of the fact that man is a religious animal. To deny that fact is to fly in the face of all human experience; to ignore it is to leave out one of the most vital elements of the whole character and activity of man. Toward this great phenomenon of man's religious nature, materialists take a variety of attitudes. Few, if any, would flatly deny; the facts are too obvious for that. Some, with notable discretion, prefer to avoid the issue. Others unfairly depreciate religion, reducing it to a matter of superstition or fear or formalism or custom or what not and then trying to dispose of it as a more or less commonplace manifestation of human nature. Still other materialists are rashly prepared to make man a new scientific religion over night. Religion must not be evaded; it is too important for that, and it must be accounted for if man is to be explained. The attempt to depreciate religion does not touch the heart of the matter and shows a lack of appreciation of what religion really is.

When all possible reductions have been made, there remains a vital reality known to the experience of multitudes of men. As to the makers of new religions, they also have apparently something to learn as to what religion is and particularly that it is something more than a code of social ethics.

The religious issue cannot be dismissed in any of these ways. Man must be accounted for with his religion or not at all. Religion has certain characteristic manifestations. The only fair way to deal with them is first to appreciate them at their full value and then ask frankly on what grounds they may be most satisfactorily explained. Man acts in these ways. What we want to know is, Why? Do machines act like that? Is there any known chemistry that produces such results? Are we acquainted with any animals which act in a religious manner? Does any being except man give any evidence of a religious nature? In short, can anything account for religion—real religion, be it understood—except the soul? The mechanism and the chemistry and even the animals certainly seem to leave much to be desired in the way of explanation. The soul—if we could be allowed to believe in it—would commend itself to our intelligence as an adequate and appropriate cause of such apparently spiritual phenomena. Do we not need that hypothesis in order to give ourselves any satisfactory answer? Let us note that religion involves belief in the soul. Therefore materialism has to explain, without the hypothesis of the soul, how man comes to believe that he has a soul.

Faith in the unseen is one of the primal instincts of man's religious nature, and without faith there is no religion. That is one reason why the scientific makers of a new religion are bound to fail. They want to offer man a religion without any faith in the supernatural, and that is a contradiction in terms. They may offer an admirable substitute for religion, but it will be something else than a religion. The characteristic objects of religious faith are chiefly these three: God, the soul, immortality. What we want to know is, why man believes so persistently and so ardently in these. Materialism does not give us any answer that can be regarded as really adequate. Again we need the hypothesis of the soul. The soul is fundamental to religion. Man believes in the soul because he has an immediate and intuitive knowledge of the soul. It is through this faith in the soul that he comes to the further faith in God and in immortality. That is an answer which proposes a cause that would at least be commensurate with the effect.

In addition to faith, religion demands love as an essential. Love of God and love of man is at the very heart of true religion. A still further essential is the ideal of holiness, of righteousness. The religious man believes in the moral law, in the moral character of the universe, and accepts the duty to conform his life to the highest moral standards known to him. Religion also involves what we may call adoration, worship, communion of man with God. These are probably the irreducible essentials. Whatever else might be added,

these will serve to show how much is to be accounted for when we undertake to explain man's religious nature. Whatever we may think of it, men do act in these ways and as though they believed these things to be realities. Why? What causes impel them to such activities? Is it because they are chemical engines or because they are souls?

There is still another subject which might be commended to the passing thought of the experimental psychologist. In his own particular field of scientific research, he is in daily touch with the question of man's relation to nature. Has he sufficiently considered the possibilities that are latent there? Man's ordinary relation to nature is usually naïve and unreflective. He uses his senses, trusts their guidance, seeks what is pleasant, avoids what is painful, obeys in a thousand ways the elementary instincts of his nature. In a word, he is essentially an animal, living the animal life, although of course his finer organism enables him to live it upon a somewhat higher plane. If he were merely an animal, obeying only mechanical impulses, he ought to stop there. That is what other animals do. If man could be kept within these limits, explanation of him might not be so difficult. But man is impelled to go further—much further. It is his relation to nature beyond these limits that gives pause and raises question.

Why, for instance, should man want to become a scientist, to know nature as well as to use it? Of course it may be replied that knowledge furthers use. That is true enough, but it is hardly to the point. Man is

interested in applied science, but he is also interested in pure science. He wants to know, not merely for the sake of using, but also for the sake of knowing. What is there in the mechanism of him or in the chemistry of him that calls for any such procedure? What is there in his animal nature that impels him in any such direction? What satisfaction can he gain from it? Yet the scientist knows well that he does gain a very intense satisfaction. What is it that is satisfied? Is it his physical body? Is it not much more reasonable to say that he is satisfying something within his body which he calls his mind? Indeed, may he not often be satisfying his mind at the expense of his body, letting the body go hungry or endure pain while the mind learns what it wants to know? It is not beyond experience that the scientist should even deliberately risk the death of his body in order that the world's stock of pure knowledge should be increased. The passion for knowledge is a passion of a high order and certainly seems to lift man above the level where mere mechanism or mere animal instinct can be thought of as a sufficient cause. It should seem plausible, even to the scientist himself, to say that he has a soul.

Man turns to nature in order to satisfy his passion for knowledge. Not less does he turn to nature to satisfy his passion for beauty. He finds scientific facts there, but he also claims to find æsthetic values as well. To the man who has the sense for material fact but lacks the sense of beauty, this seems sheer nonsense. He is sure that a primrose is simply a primrose and "noth-

ing more." It was something much more than that to Wordsworth. Does not his testimony have the superior value? On the one hand, he had an eye for natural fact as keen as that of any scientist. On the other hand, his poetry is a constant reminder of the beauty to be found in the multitudinous aspects of nature—in flowers and birds and rocks and clouds and curling waters and moonlight on sleeping fields and scores of other natural objects.

The scientist seems to have little liking or respect for the poetic interpretation of nature. One wonders why. Is it because he thinks that nature is nothing but fact? It may be so, but then, in the case of any particular object, what is the fact? A plain man looks at a vase, for instance, and judges it according to his senses. He says that it has a certain size and shape, that it is hard and smooth and yellow. The physicist tells him that it is a mass of protons and electrons in inconceivably rapid motion and separated by relatively great spaces. The artist says that it is beautiful. What is the fact? Which of the judges is right? May it not be that they are all right? It depends, of course, on what we understand by an object. The difficulties of definition are almost if not quite insuperable.

Can we come any nearer to it than to say that any object is the totality of its potentiality for affecting other objects, including minds? If that be valid, perhaps there is something to be said for the poet. An object cannot produce any effect which it has not the inherent capacity for producing. If it produces the

effect of hardness, it may be said to have the quality of hardness. Likewise, if it produces the effect of yellowness, it has the quality of yellowness; if it produces the effect of a mass of protons and electrons, it is a mass of protons and electrons; if it produces the effect of beauty, it has the quality of beauty. All of these qualities are on the same footing. The same object may possess them all, and therefore may actually be what each observer takes it to be. The qualities do not contradict or nullify each other, although they may seem to belong to different orders. Each observer sees a part of what the object is as a whole.

The scientist need not feel bound to deny the reality of what the plain man perceives. He, too, perceives the same things, and until lately they have seemed just as real to him. His deeper research has not destroyed that reality. If it had, then he would be under the painful necessity of ever moving on from one unreal ground to another, because he could never know whether the new ground would not likewise sink under his feet. It is better for him to suppose that he is passing from partial truth to fuller truth and that each forward step simply brings to light another reality to be added to the first. He may also venture to hope that he thus comes ever closer to the absolute truth which underlies all relative truth. The scientist should likewise not feel bound to deny the reality of what the poet perceives. If he himself does not perceive anything of the kind, that is probably because he is in that particular case a non-conductor. It is probable that men will never know

all that any object is, and every object is likely to be much more than any one of us supposes it to be.

All this is far from meaning to imply that there is no such thing as illusion or mistake. Objects may sometimes seem to produce effects which they do not really produce. In spite of all possible illusion, however, we may fairly suppose that there is such a thing as normal and valid perception. The boundary between that and illusion may not always be easy to define; but perhaps the best practical test is in a general agreement among all persons capable of receiving a particular sort of effect. There is, for instance, a normal judgment of colors, and the color-blind must not claim to set it aside as mere illusion. It is of such normal judgments that we would speak. Within the range of these, there will still be much difference of opinion; but it is best to cultivate a liberal and appreciative attitude toward the normal judgments of others. That tends toward the enlargement of our knowledge and the deepening of our experience. It is especially desirable where men differ widely in their susceptibilities—have their windows open in opposite directions—as is the case with scientists and poets.

Danilevsky, the Russian critic, is quoted by Professor Mirsky as saying that "beauty is the only spiritual quality of matter." To the man of poetic or artistic temperament, that seems illuminating and profoundly true. It is likely to make the scientist laugh? What? Matter with a spiritual quality? Ridiculous. Yet right there is the whole issue, not only between science and poetry,

but also between materialism and the soul. The logic of the materialist himself would seem ultimately to lead in that direction. If matter can think and love and dream and worship, then it certainly possesses something like what we mean when we speak of spiritual quality. Multitudes of supposedly normal men receive from matter the effect of beauty and therefore matter has the potentiality of producing that effect. Is beauty to be defined as a purely material quality or are those who profess to perceive beauty to be relegated to the lunatic asylum? Would it not be more reasonable to suppose that Danilevsky is right and that this is a genuine effect which science has so far failed to register? What we are chiefly concerned to point out is that men have a normal capacity for receiving even from nature such spiritual effects. Whatever science may think of them, they are there. Can they be accounted for in terms of mechanism? Do they not find their best explanation through the supposition that man has a soul?

What attitude, then, will the behaviorist take toward these higher values? He may decide to shut the door upon them. This he has a perfect right to do if it pleases him better to investigate something else; but in that case it must be recognized that his study is so far limited in scope and significance. It should be recognized also that he so far limits his right to draw large inferences and make sweeping conclusions concerning the nature of man. He professes to speak as an expert, and he ought not to testify concerning values which he has not been willing to weigh. He cannot deny these

values. He must allow that these also are ways in which men behave. He may still insist that he can reduce them to mechanism. Very well, that is his right. Let him appreciate them first and then set about the stupendous task. If we are going to study behavior, it is well that we should study all behavior. That alone will bring the real test. One cannot help wondering what ground there is for the assurance that all these higher values—properly understood and fully appreciated, not caricatured and debased beyond all recognition—can be interpreted in terms of chemistry and physics. Will science really account for them all without the soul? Do the materialists really think that they can appreciate the Sistine Madonna by analyzing the paint?

CHAPTER III

IN THE LIGHT OF RELATIVITY

✓ THE general principle of relativity may be stated somewhat as follows: Our perception of all things is relative to the point of view from which they are observed. Let it be carefully noted that this statement does not say that all things are relative. Our observation does not determine what things are, but only what they seem to us to be. What is relative, therefore, is not the things observed but only the perception of the observer. ✓ To say that all things are relative to the observer and to his point of view seems like a denial of all stability and reality. ✓ To say that our perception of all things is relative to us and to our point of view seems entirely obvious and reasonable. It also seems likely to throw a flood of light upon many interesting problems.

The principle of relativity helps to account for the wide differences of opinion concerning the soul, differences which range all the way from positive denial to confident belief. These differences have arisen because the subject has been considered from widely different points of view. There is a sense, of course, in which all men have the advantage of looking at the matter from a similar point of view—at least from the same general level. They are all human beings,

and there is a common basis of human experience. This naïve human view of the world leads to something like a consensus of opinion. If this naïve attitude could be maintained, there would probably be very little disagreement as to the existence of the soul among men who were capable of thinking about the matter at all. Do not history and experience show a practically universal belief in the soul wherever men have been guided simply by the light of an intelligent common sense?

The multitudes of men may be more or less content to live upon the lower levels of naïve experience and thought; but humanity as a whole is driven forward by the impulses of its own life, is called forward by the wider vision of its great leaders. The first result of new knowledge is skepticism; there are many things to discard, many to correct. Man's hope is that the ultimate result of growing knowledge will be confirmation of what is best and deepest in his childlike faith. At least these strong and natural instincts of humanity are not negligible, not altogether without a meaning and a far-reaching significance. Reason has no right to set them aside in arrogant and arbitrary fashion; it has only the right to seek to understand them and to put them to the test. Reason is bound to climb up from the broad levels of the plain and to seek the heights from which there may be the prospect of new horizons; but it must not forget that the mountains are based upon the plain and that they have their own dangers of mist and storm. These higher levels are many and they lead to

many different points of view. It will be significant to observe certain conspicuous levels from which the world may be viewed.

There is first of all the level of matter. That is the level of science. From the level of matter, nothing is to be seen but matter and the attributes of matter. Science has a right to its own point of view, and there can be no reasonable objection if it chooses to confine its attention to material things. It naturally looks to the scientist as though matter were the only form of existence, and there is a natural tendency for him to think and to claim that everything in the world can be explained on a material basis. Here he is clearly exceeding his right. Such a claim is justified only on the assumption that the scientific point of view is the only legitimate one or at least on the assumption that nothing but matter can ever be described from any other point of view. This he cannot possibly show, and the only true scientific attitude is to allow that all this is as yet an open question.

The realm of science is a realm of causes. Philosophy may raise some troublesome questions concerning cause and effect, the theory of relativity itself may make science a little less sure about them than it used to be; but for all practical purposes they stand fast and still offer a good working hypothesis. Whether in all their strictness they can be carried over into the fields that lie beyond the range of natural science is at least questionable. That they can is not to be assumed as a matter of course but must be independently established.

Surely it is a bold and as yet unwarranted assumption that purely mechanical causes and effects can thus be carried over and made the exclusive law. On the level of matter, however, they do seem to justify themselves. They are something which from that point of view really appears, and they are not to be set aside except for good and valid reasons.

The realm of science might be called a realm of machinery. This is a legitimate conception. Nature does indeed seem to act like a great machine. So it is, we may grant, considered exclusively on the level of matter. There are obviously some things in the world that have every appearance of being more than machines. It is not to be assumed that the mechanical conception, simply because it has been found so valid and so useful within certain limits, is therefore to be carried beyond these limits and made to account for all phenomena, no matter how unmechanical they may seem. It is a fair assumption that phenomena of another order are probably to be accounted for by causes of another order. All that we have any right to say is that the world looks like a machine so long as it is considered exclusively on the level of matter and from a purely materialistic point of view. On other levels, it may look otherwise. Such is the inference to be drawn from the law of relativity—the law that our perception of things is determined by our frame of reference.

Above the level of matter is the level of life. To the extent that life involves matter, it doubtless must obey the laws of matter. Certainly it does not wholly free

itself from those laws. Therefore, on the level of life much that is purely material is still to be observed. In passing to the level of life, so to say, we do not altogether abandon the material point of view or frame of reference. Nevertheless, we have attained to a new point of view; the old is no longer sufficient. A new and hitherto unknown factor has entered into the case; new objects appear within the field of vision; new perceptions and interpretations are called for. Life may involve matter, but life is not, therefore, identical with matter. It is not now matter that is to be explained and accounted for, but life. To insist on clinging to the lower point of view or on shutting one's eyes to everything but what can be seen from that point of view is to ignore the law of relativity and to close the pathways that lead to larger knowledge. Life certainly presents phenomena that do not appear in inanimate matter. We should endeavor to see clearly all the phenomena that become visible from this point of view and should endeavor to judge them without prejudice. They do not naturally suggest a mechanistic interpretation.

Especially characteristic of lifeless matter is the fact that it remains inert until it is moved by some external agency. Especially characteristic of living matter is the fact that it is apparently self-moved. External agencies, of course, play their part, but that part certainly seems very far from being the whole. What are we to say about the residue? Neither mechanism nor chemistry would seem to offer a complete and adequate explana-

tion of self-movement. There is something here that such agencies do not elsewhere produce. In the lowest forms of life, we might perhaps allow ourselves to be satisfied with the explanation that movement of living matter is due to mere tropism. As we ascend in the scale of living being, any such explanation seems more and more at variance with the observed facts. We are almost forced to believe that movement is originated if not wholly determined by the life itself. We are almost forced to think and to speak of volition.

Especially characteristic also is the further fact that life has the marvelous potency of self-propagation. It is so new and so strange that we naturally look around us for new reasons. It is present only when life is present; outside of life, a whole universe of matter exists without any power to propagate its kind. Is it not most reasonable to suppose that there is something in life itself which alone accounts for this power? Is not the underlying reason a vital one rather than a material one? Of course reproduction has a material basis, but we must repeat that that does not settle the question. No one denies that life uses matter, but the engineer is not the engine. Life and matter are not identical or even equivalent terms. Matter can exist and does exist without life; life is something added to matter. That something has the power—unknown to lifeless matter—of moving itself, of propagating itself, of increasing itself.

Still further, we may say that life is self-determined. Denial of this apparent fact rests upon the doctrine of

determinism, the doctrine that there is and can be no freedom, but that all action is bound up in a chain of inevitable causes. The scientific materialist insists that these causes are purely physical. He does not sufficiently distinguish between determination and self-determination. That difference is immense. Determination makes life a mere machine; self-determination at least frees it in some measure from mechanism and chemistry. Self-determination would seem to offer the explanation which best accords with the facts of the case. Philosophical determinism would of course still insist that life is not free, that its action is at least inevitably determined by motives. That is a question rather beyond our present range, but we may note that this is at least self-determination, whether it be free or not. Inanimate matter is not even in this limited sense self-determined. Furthermore, to say that life is bound by its own motives is like saying that life has to do what it wants to do. So far as it is not entirely governed by external causes and is determined only by its own motives and its own nature, it can make a just pretense to freedom. So far it is at least independent of everything but itself. What else should it want to do except what it wants to do; and so far as it can do what it wants to do, has it not what we mean by freedom?

Scientific determinism, so long as it confined itself to the realm of matter and did not attempt to encroach upon the realm of life, has until lately seemed to be on more logical ground. It has rested its case upon the

accepted scientific conviction that every atom of matter was strictly determined by purely physical causes and that all matter which these atoms composed must therefore necessarily obey the same fixed law. It has still further fortified this position by pointing to the remarkable success of science in predicting just what matter would do under given conditions. Science can build machines which will run according to its prediction. It can foretell successfully a hundred years in advance the exact moment of an eclipse. It has demonstrated its ability to do a thousand similar things in full confidence that there will be no failure in the working of the unalterable laws. Such evidence was overwhelming in its power of conviction. There seemed to be no satisfactory answer to the confident claim that the whole realm of physical nature, at least, was governed by a strict scientific determinism.

Quite unexpectedly, this seemingly solid ground has recently been shaken. It actually appears ready to dissolve beneath our feet. Professor Eddington, in his wonderful book, *The Nature of the Physical World*, interprets to us a new scientific attitude. According to this view, the astonishing power of science to predict the action of matter does not rest upon any such basis as had been supposed. He says in substance that scientific knowledge is not absolute but statistical. Science does not know and cannot know what any single atom will do, what any individual thing will do, what any comparatively small group of things will do. These seem to obey no recognizable law unless it be the

law of chance, seem able as it were to do as they may choose. It would appear as though there was a certain freedom of the atom. The electrical energy which it holds within itself is in some measure self-determined. If this be true, how then is it possible for science to be so assured and so accurate in its predictions? The answer is that it can confidently rely upon the valid basis of its sound statistical knowledge.

By statistical knowledge is meant the knowledge which has to do with the average action of large bodies of individuals. Life insurance, for instance, is based upon such knowledge. It cannot predict the term of life of any particular insured individual; but it can predict the average with such accuracy as to make life insurance perhaps the safest business in the world. Yet its statistics are based upon only a few millions of individuals. Science has a vastly wider scope; it is dealing with immense aggregations. When we come to atoms or electrons, the number is inconceivably great, so great as to be practically infinite. Science has therefore boundless opportunity to learn the statistical averages of what we might call their self-determined habits of action. The fundamental laws of science are therefore likely to be proportionately sound—not absolutely certain, but for all practical purposes invariable.

Such is a brief and summary interpretation of Professor Eddington's testimony. It seems to release nature from the grip of a rigid determinism. It seems to open the doors again to a freedom which had apparently been banished forever into the outer darkness. Scien-

tific determinism is the natural and perhaps the necessary foundation of philosophical determinism. If the foundation is no longer reliable, then the superstructure is insecure. Shall we grant freedom to the atom and deny freedom to life? Perhaps the individual motive is at least as free as the individual atom. Perhaps it is only a statistical average of motives which gives the appearance of an inevitable law. Both the external and the internal causes which have seemed to bind man as with chains are perhaps after all not quite so absolute as some have claimed. If life is self-determined and if it is not altogether the slave of its own absolute motives, then life is to some extent free.

On the level of matter, we are concerned with causes; on the level of life, we must take into account the fact that we are also concerned with ends and even with purposes. A living organism has many parts and many functions. Why do these act as they do? Because they are driven by certain mechanical causes? Yes, but also because that is what they are for. Life has the power to shape matter into certain organs which will serve its needs. These act continuously to achieve certain definite results. The heart, for instance, attends to its business of pumping blood without ceasing for a single instant for three score years and ten. Why? Because it is driven by a certain mechanism, like any other pump? Yes; but it meets with obstacles and overcomes their hindrance, it repairs its own waste, it is untiring and persistent in accomplishing its assigned end. Together with other organs, it seems to be performing its own

particular function in fulfilling the general purpose of an organism which created it and which it in turn helps to support and to serve. What determines these ends? Where do these purposes reside and by what power do they shape their plans? A merely mechanistic or deterministic answer is too remote from the requirements of the case. What has mechanism to do with the framing of self-determined plans and purposes?

Must we not rather turn for our answer to the law of relativity? On the level of matter, life is essentially unexplainable, because it is in fact incredible. If it appears at all, it can only seem like an illusion or like some new and strange machine. The uncivilized man who sees an automobile for the first time judges it to be an animal or, if he be religiously inclined, a devil. How could he do otherwise? The thing appears to move itself and he has never known anything but animals—or devils—to do that. He needs a new frame of reference. Conversely, but with a similar logic, the pure materialist who should see an animal for the first time would judge it to be a machine. How could he do otherwise? The thing moves and he has never known anything but machines to do that. He, too, needs a new frame of reference. When the right frame of reference is found, then life appears no longer as machinery but as life. It is a new and unique phenomenon, and the explanation of it is found in itself and not beyond itself. In a word, we are bound to explain life on the level of life. To try to explain it on any other level is to ignore its unique character and its own

specific phenomena. It is a proposal to explain one thing in terms of something entirely different.

Above the level of life is the level of mind. Mind implies life and perhaps also implies matter. Nevertheless, it is not therefore identical with either of them. Instead of trying to interpret mind on the basis of what may already be known about matter and life, we ought to pass frankly to the mind level and endeavor to see what is revealed from that point of view. Mind should be judged by its own phenomena. Only so can we hope to reach any true understanding of mind or any true appreciation of its peculiar manifestations. Our perception of mind will be relative to the frame of reference which we may choose. The only adequate frame of reference will be one that is erected on the mind level. How can we dare to judge mind or expect to interpret its nature or its manifestations or its causes except as we observe it from a point of view to which it is fully revealed? Judged from its own level, mind offers us something new and different to be observed, suggests that it is an entity of unique kind and quality, seems to involve new laws and modes of action, presents the probability of characteristic causes and explanations.

On the level of mind there comes into view the amazing phenomenon of thought. There is nothing that seems less material or less capable of being explained by material causes. Nowhere more than in the case of thought is it important that we should find the right point of view. Thought is not mechanism, it

is not chemistry, it is not a mere biological or physiological function; it is thought, something so different from all other things that it can be called only by its own distinctive name. If we desire definition, it should be sought by the analysis of thought itself and not by trying to resolve it into something utterly different; it should be stated in terms of the attributes of thought and not in terms of purely physical attributes. The important point is that thought should not be confused with matter. Each appears from its own level as a great fact to be accepted and interpreted according to its own nature. In the light of relativity, each is a valid and distinct appearance of the universe, whatever may be the ultimate truth behind them both. Each is to be taken for what it is observed to be on its own level.

Mind involves not only thought but also self-consciousness. This of course is denied, but the denial carries weight only in the sense that it represents the appearance of mind as viewed from the level of matter. We cannot judge the relative value of such an opinion until we have also made fair and open-minded observation from the higher point of view and duly considered all that presents itself to us from that higher frame of reference. The higher point of view is likely to have greater validity for such a subject, and therefore the lower view can claim to be valuable only so far as it accords with the higher. On this higher level, mind certainly appears to be conscious of itself. To say that there is no such thing as self-consciousness is to deny the testimony of all human experience. Such denial is

conceivable only on the ground of the obstinate opinion that the lower point of view is the only possible one and that there is no valid frame of reference from which self-conscious mind presents itself as one of the legitimate appearances of the world. This is a violent assumption resting upon a fixed prepossession. If it is true, then human experience is of very little value for any purposes.

The principle of relativity helps us to see the matter in a very different light. It gives us to understand that our outlook must needs be constantly changing with every change in our point of view, and it leads us to believe that we may behold reality in many legitimate aspects. Any particular aspect may seem strange or even ridiculous from one point of view, but may seem entirely natural and reasonable from another. It is such a consideration that justifies us in holding that a belief in self-conscious mind may be just as proper and reasonable as a belief in any scientific conclusion. When we take our stand at the point of view from which any such reality could possibly be seen, it is something which actually and convincingly appears within the range of our vision. If there is any human experience and reason, then the principle of relativity gives us good ground for the conviction that self-conscious mind has at least equal standing with matter. Perhaps it has better standing, inasmuch as it is more immediate to our experience.

Mind is not only capable of self-consciousness but capable even of self-knowledge and self-criticism.

These do veritably appear to our view when we look at the world from the level of conscious mind. The evidence for these things is at least as good as the evidence for anything supposed to be known, and therefore we have a right to regard them as realities and not illusions. They are a part of our experience. The working of the law of relativity does not tend to nullify or to confound our experience but rather tends to confirm it and to clarify it by making plainer the conditions under which it must act. Relativity makes clear to our experience that it must necessarily behold the realities of the world in many lights and from many levels and that the perceived appearance of things will vary according to the several points of view; but it makes equally clear that these different visions do not necessarily annul one another but that various appearances may have an equal degree of validity. There is undoubtedly a level of observation above the levels where matter and life appear. There is a new aspect of the world to be considered. Tentatively, we call it mind, for we must use some designation. Whatever mind may prove to be, there it is as a fact of our experience. When we cease to insist that it must be judged from the lower points of view and frankly proceed to consider it on its own level, it grows upon us a unique entity with unprecedented powers. When this new experience is accepted at its face value as something which has a validity at least equal to that of any other experience, then the rest is easy to accept and seems indeed almost inevitable.

In the light of what has been said, man is a machine, man is an animal, man is a mind. These statements do not contradict each other. The law of relativity allows for them all and justifies them all. Man is each and all of these things. It is not so much that each is a part of a general whole, although that may be true enough; the point is rather that man is one or more of these things according to the point of view from which he is observed. What we must be careful of is to bear in mind the law of relativity and not let one point of view exclude another. When we have observed him from all three points of view, man is seen to be machine, animal, mind. As such, he has been the creator of certain values. Our observation and interpretation of these human values is also subject to the law of relativity.

Man has been the creator of the values of science. He has built up a mighty structure of positive knowledge. Has he a right to believe that this knowledge is real and valid? Does it represent a true and significant view of the world? The scientist would perhaps be scornfully indignant at such a question. Of course it is valid. Theoretical science is justified by applied science. The scientist has tried his knowledge by practical tests and it has successfully met those tests. His machines work, his structures stand, his chemicals act as he has foretold. What more could be asked? This is all very well so far as it goes; but it does not go far enough. Science may indeed know enough to make successful engines and telephones and airplanes and

thousands of other practical and useful things, but can it and does it offer us a true interpretation of the meaning of nature, an acceptable view of the reality of the world? The idealistic philosopher would, of course, say very emphatically that it does not. He would even go so far as to claim that the whole scientific scheme is only a plausible fiction in which appearance is substituted for reality.

If it could be successfully shown that the scientific point of view was not a valid and legitimate one, this depreciation of science might seem to be reasonable. That, however, is what we cannot fairly do. There is undoubtedly a point of view from which the world does actually appear to be what the scientist says it is. This point of view, moreover, seems to be the one most available for the observation of the physical world. In the light of the principle of relativity, there is no reason for us to doubt that this point of view is real and natural and legitimate; there is every reason for us to believe that it affords us a prospect which represents reality and not illusion. Science, then, is true from the scientific point of view. It does not need to be true from any other.

Man is the creator of the values of his social life. There is only one way to understand this fact and that is to find the appropriate point of view and judge it from its own natural frame of reference. To consider human society as a machine will not help us. To consider human society as an organism will not help us. As we have noted before, society is an organization and,

therefore, man is an organizer. That is the point of view which is naturally suggested by our experience of the facts. If we accept it frankly and try to make our observations from it, we are bound to have a larger and a juster conception of man. We are in a much better position to see the full significance of all his social powers and activities. We shall come to see, for instance, that they still further widen the deep gulf between him and the brutes. Social man is an evident reality to be explained. To insist on seeing him and explaining him on the merely physical or biological level is to mislead ourselves. Even the personal or the psychological level is not quite good enough. If we can follow the hint given to us by the principle of relativity and can find and use what may be called the human social level, then we shall have at least some reasonable chance of gaining a true and just conception.

Man is the creator of the values associated with poetry and music and art. The brutes have no conception of this realm of values and could not possibly judge it from their point of view. Through long ages of his evolution man had no conception of it. Great multitudes of men, including many highly intellectual men of certain types, still seem to have but a faint glimmering of its import. The point of view from which it becomes visible or is revealed in its full significance seems to be accessible only to those who are gifted with special powers of insight. Shall it therefore be denied? Not unless the color-blind shall be allowed to deny

the perception of color or the deaf to deny the perception of sound. The affirmative testimony is too clear and genuine to be dismissed as springing from mere fancy or illusion. We might as well try to deny science as to deny art.

Relativity again gives us the clue. Here is a genuine point of view from which real things are to be seen. That they do not become visible from other points of view is only what we might expect. Science may know nothing of all this; if so, let it hold its peace and leave the matter to those who do know because it has been their privilege to behold the vision of the world from the æsthetic point of view. In this matter, "we are compassed about with so great a cloud of witnesses" that we cannot refuse to give credence to their testimony. They are among the wisest and the sanest of mankind. It is in this field that we most often meet with the manifestation which we call genius. Here humanity touches its high-water mark.

Man is the creator of the values associated with religion. This is obviously so in the case of natural religion. It would also be substantially true in the case of revealed religion; for even here man's religious nature has built up the forms of his faith on the basis of the supposed revelation. Whatever may be thought of this, it is an undeniable fact. We are here in touch with recognized reality. To the materialist, religion may seem to be a mere delusion; but to the man who has experienced religion, it seems altogether natural and normal. Have we not here again a difference in the frame of reference? The evidence as to the reality of

religious experience is so overwhelming that it cannot be ignored except by those who are incapable of seeing it. They are not even willing to seek the point of view from which it might be seen; and from their own predetermined point of view, it is of course invisible. Those who look out upon man's activities and feelings and ideas from the religious point of view do become aware of man's actual religious experiences and therefore must accept them.

What we need to realize is that the religious point of view exists just as truly as the scientific or any other. Moreover, it has a fair claim to validity. It is justified by the testimony of human history and human experience and human nature. Looking out upon life from this point of view, man becomes aware of righteousness and love and sacrifice and service and faith; and he gains an unshakable conviction that this ideal vision is a part of the world's reality. It is something not less real—perhaps more real—than any of the physical objects which he can see and handle. The principle of relativity helps him to understand why it is that he seems to see so clearly and unmistakably what other men, of equal or superior intelligence, apparently do not see at all. It gives him added assurance that his vision is not necessarily a mirage because it is not visible from other points of view. He finds himself strengthened in the conviction that he is something more than a machine or an animal or a mind, something more than a social being or a poet or a seer—that he is an immortal soul in touch with the over-soul.

The principle of relativity makes clear to us that

there are many points of view and that our perception of all things—material or immaterial—is relative to the point of view which we voluntarily or involuntarily take. On the other hand, relativity does not give us assurance that any particular point of view is a valid one. Neither does it give us assurance that our eyes are capable of normal vision. If a man should persistently stand on his head or wear colored glasses, his report concerning the world would doubtless need some correction. There is always the liability to personal error, always the possibility of illusion and mistake. Science recognizes this same danger from human fallibility and tries to eliminate error by comparison of many observations and experiments. By some such consensus of opinion, the validity of any point of view must be established. Relativity simply assures us that from any valid point of view we may be able to see corresponding reality and that our observation is not necessarily to be distrusted because it is apparently contradicted by observations made from another point of view. This helps us to understand that the observation of the materialist and the observation of the idealist may both be true, that science and religion may both stand for reality. If with our present knowledge we are unable to reconcile them, there is at least good ground for the confidence that they can be reconciled by a broader understanding of truth. Our present resource is to try as best we may to see the world from both points of view at once.

In a physical sense, so far as the universe at large

is concerned, we are bound to a single point of view. We are inhabitants of a particular planet rushing through space at a given rate of motion. Our actual observation of the universe must be confined to that frame of reference. Thought concerning the universe, however, is not thus confined. It can to some extent reach out to other frames of reference and make some calculation of differences. When we come to intellectual and spiritual points of view, the possibilities are practically unlimited. We can take any point of view almost at will. We can combine points of view and see from more than one at the same time. It is this that we must endeavor to do. There is a sense in which the higher points of view may include the lower while the lower may not include the higher. For instance, mind may include matter more easily than matter may include mind, religion may include science more easily than science may include religion. As we climb the mountain, the horizon widens and we can see things that we could not see before. The danger is that we should no longer see what was perfectly clear from the lower level. Our endeavor should be to see to the bounds of the widest possible horizon but also to see all that lies between us and the horizon.

The sum of the matter is that the law of relativity discloses itself not as a law of confusion and negation but as a law of freedom. It shows us a way of escape from the narrowness of a purely material point of view. It does not do this by denying the validity of that point of view and substituting another in its place.

Indeed, it justifies and confirms it; but it shows that its validity is limited to its own realm of matter, that it has, so to say, no proper jurisdiction beyond that realm. It suggests, too, that there are other points of view from which other and higher realities may be observed. All this has a notable importance for those who would inquire after the soul. It frees them from the confident but really naïve assumption that there can be no other level than that of matter, no possible frame of reference from which the soul could be discerned. It justifies them in seeking such a higher point of view. Even the materialist can hardly deny that they have found it. There certainly is an idealistic as well as a materialistic point of view. Indeed these two seemingly contradictory philosophies may almost claim to have divided the world of thought between them. The principle of relativity allows us to hope that they may finally prove to be not contradictory but harmonious.

II

THE SOUL

CHAPTER IV

THE LONELY GHOST

OUR inquiry thus far has seemed to lead toward certain general conclusions: The first of these is that mechanism appears to be inadequate as a means of interpreting human nature and that we need the hypothesis of the soul. Still further, the rejection of mechanism and the acceptance of soul seems more and more necessary in proportion as we rise higher and higher in the scale of human powers and values. Finally, the principle of relativity offers us good ground for the conviction that there is a perfectly valid point of view from which the soul may be discovered as a genuine reality. Can we find the essential point of view and can we indeed behold the soul with intellectual and spiritual vision?

All search after knowledge must begin with some sort of assumption, either expressed or implied. Unless we assume something to start with, we cannot even begin to know. There is no such thing as absolute human knowledge; all knowledge is conditioned by its original assumptions. What we call positive knowledge is subject to this same necessity as to an inevitable law. Even mathematics must needs begin with certain fundamental assumptions, and its conclusions can never be

any more valid than its original axioms. All natural science begins by assuming the reality of matter. If there is no matter and no perception, then the whole structure of science is "like the baseless fabric of a vision." Such axioms of science, however, approve themselves to reason as adequate for their purpose, and they form the solid foundation of all scientific knowledge. They do not offer a good point of departure in the search for the soul. It seems necessary to begin at the other end, to rise definitely to the higher level, to inquire for new axioms. The question now is what we may here assume. What may be directly and immediately perceived in this world beyond matter?

What is the primary conviction upon which all human knowledge must rest and which itself does not need to be proved nor can be proved? The assumption of science as to the reality of matter may be true or may not be true, but it certainly is not primary. If we are to assume that matter can be known as a reality, we must first assume that there is a knower. The ultimate knowledge upon which all other knowledge must rest can come only by immediate intuition and must, so to say, be self-known. Furthermore, it must be of such a character that it does not need to deny anything else in order to get itself accepted. What we undertake to assume should be as simple as possible and as sure as possible. It will have to be in terms of mind rather than of matter; for matter cannot know, and if there is anything that can know, it can only be what we mean when we speak of mind. We are, then, in

effect, searching for a primary attribute—the original germ, so to say—of mind.

Probably the ultimate reality knowable to man is his own experience. The beginning of knowledge must lie somewhere within that realm. What, then, it may be asked, is the primary intuition arising in man's experience? Descartes gave us the clue to such a first principle of knowledge in his famous dictum, *Cogito, ergo sum*. Man's original intuition is, "I think," and from this the first deduction to be drawn is, "I am." That is certainly in the right direction. Somewhere there the beginning and the basis of all knowledge must lie. Some have thought that Descartes assumes too much to start with. "I" implies more than a primary intuition with reference to self or personality. "Think" raises far from simple problems with reference to the nature of thought. "I am" suggests abstruse philosophical problems of existence or being; but it might follow readily enough if "I think" were once granted. The dictum of Descartes is true enough, but it seems already to have carried us a long way from the beginning of knowledge.

Professor Hans Driesch has aimed to simplify the principle of Descartes and to reduce it to still lower terms. He proposes the following formula: "I consciously have something." There is in this statement still the difficulty involved in the "I," but the other objections seem to have been eliminated. There is no implication as to the nature of the "something" which is had but only an assertion of the having. The adverb

"consciously" does not imply anything as to an entity called a consciousness. The formula proposed involves three points; first, there is an "I" which has; secondly, there is a "something" which is had; thirdly, the "I" is conscious of having. These propositions commend themselves to the reason as simple and as undoubtedly true. Perhaps, however, even this limited assumption is too much. The "I" seems like a deduction rather than like a primary intuition. The "something" seems problematical, an object which is different from its subject or a subject which is its own object. "Consciously" is really an unobjectionable word, but it may nevertheless be liable to cavil on the part of those who might be overzealous to oppose any seeming implication as to "a consciousness." The formula is an excellent and a suggestive one if not quite irreducible. It illuminates our path and carries us still further in the right direction.

It is desirable to reduce to the lowest possible terms the original assumption which the very law of knowledge compels us to make. The formula of Professor Driesch seems to offer a basis for such an attempt and to suggest the way in which it can be made. The first step to be taken in seeking a simpler formula would naturally be the elimination of the "I." This idea can be dispensed with at first and can be presently recovered. It is an idea which is sooner or later inevitable. Much the same might be said of the "something." As an element in a primary intuition, it is at first embarrassing to our thought; but it cannot be permanently lost

sight of and is bound to reappear. This leaves us with the single idea involved in the word "consciously." If such words as "consciously" and "consciousness" are thought to involve any objectionable implications, let us choose another word which has much the same meaning but which is more nearly colorless, more simple, more self-evident. Reduced to the lowest possible terms, the primary human intuition might then be stated in this formula: "There is awareness." It is hard to see how we can get beyond that or how we can doubt that. Surely it implies nothing beyond itself. It would seem to be irreducible. It would likewise seem to be irrefutable. It cannot be proved and cannot be disproved, but it rests firmly upon the solid basis of universal human experience. If there is to be any knowledge at all, we could hardly begin with less than this.

As to whether or not there practically is awareness, each of us must appeal to his own experience. If for any individual the intuition is not verified by that test, then for him it falls to the ground. If it is thus verified, then for him it is an assured principle which cannot be shaken by any contradiction or denial. He simply knows, beyond all necessity or possibility of proof, that it is so. It is safe to say that no negative proof can be brought. Questions and difficulties may be raised, but these can never be sufficient to make us really doubt for a moment. Indeed, the very suggestion of a doubt would only serve to make assurance doubly sure. We should have to be aware of the doubt before we could either suggest or entertain it.

Here we are, then, with two assumptions, awareness on the one side and nothingness on the other. Neither of them can be proved. We must make our choice between them. Have we not a right to say that awareness has the better claim to our confidence? It can be felt and cannot be disproved; nothingness can neither be felt nor proved. If skepticism is forced to bear the burden of proof, its case is hopeless. It cannot prove a universal negative; neither can it disprove our primary intuition of awareness. If the appeal should be made to human experience, skepticism would have no ground on which to stand. We cannot have an experience of nothingness. We can and do have experience of awareness. It is upon this experience that the case really rests. Of course, if the experience of awareness were a single or even a rare one, the grounds of confidence might not be very secure. So far as can be judged, however, there is every reason to believe that it is universal. Each man knows for himself that he is aware. Every contact with his fellows makes him sure that they also are aware. It is an intuition not of one man or a few men but of humanity.

In reducing man's knowledge to a primary intuition of awareness, we seem to have plunged into an abyss. We have indeed found it to be not an utter void, not an abyss of mere emptiness and nothingness. We have met with something at the bottom which gives us assurance of reality. Nevertheless it is a gulf of darkness with only this one little glimmer of light. How are we going to climb out again? How can we get

back even to the ground of Professor Driesch, to the ground of Descartes? The answer is that we can do so only by a series of further intuitions. These, and these alone, are the rungs of the psychological ladder by which we may climb up and up until we come into the presence of that lonely ghost which we call the individual soul. Can we be sure, then, that these further successive intuitions will all be as certain as the first? By no means. No intuitions are absolute. They are only as valid as they show themselves to be in the light of all further trial and experience. Maybe, then, there is no safe ladder. That is one possible alternative, but it carries along with it the consequence that there is no science, no knowledge, no thought, no world. If there is no experience beyond mere awareness, there can be for us practically nothing else. We must come to a knower before anything can be known.

Under such circumstances, we must climb up by the best ladder that we can find. We must make our choice between trusting to the help of our intuitions or remaining in the gulf of darkness. If we see good reason to choose the only way toward the soul, then we must trust ourselves to the conviction that the soul is capable of self-intuition. That is the only way in which it can come to know itself. Self-intuition involves self-consciousness and self-knowledge. The soul does not need to prove itself to itself. It knows, "With knowledge absolute, Subject to no dispute." Such intuitions are immediate to our experience and they bear with them the strong conviction of undeniable reality. They do

not have to prove themselves; they have every right to trust themselves until they can be proved untrue.

We cannot, of course, undertake to trace all the steps by which the soul comes to the knowledge of itself or all the psychic elements which unite to constitute the soul. In the first place, nobody knows them all. In the second place, they are too subtle for adequate analysis. Probably they vary in each individual case. It is sufficient here to indicate a process and a result. If these commend themselves to our judgment and are confirmed by our experience, details may be left to the penetrative insight or the illuminating experiment of the psychologist. Meanwhile, let us note, by way of general illustration, some of the steps by which we may ascend from the primal fact of awareness to a belief in the soul.

If we may feel confidently assured of the truth of the primary intuition that there is awareness, then it follows that this awareness is not a mere abstraction existing by itself. If there is awareness, there must be something which is aware. That is a second intuition, but it is solidly based upon the first and carries its own evidence. It is not merely an argument but likewise an experience. It becomes in its turn a firm assurance, not to be shaken. Likewise, if there is awareness and also something which is aware, then it follows that there must also be something to be aware of. This latter something may of course be merely the subject itself considered as an object of its own awareness or it may possibly be something outside of the subject of which

the subject is aware as something different from itself. In any case, that which is aware is surely aware of its own awareness. This is equivalent to saying that that which is aware is in some sense aware of itself as being aware, even though it may not as yet make any distinction between itself and that which is not itself. This surely is consciousness in the essential meaning of the word—though, of course, not necessarily “a consciousness.” It is even self-consciousness.

All this brings us back to the formula of Professor Driesch, “I consciously have something.” If the “I” still remains to be defined, at least we have found adequate reason for accepting the view that something is aware of something and in that sense consciously has something. Furthermore, the something which is aware of something is also aware of its own awareness and therefore of itself. This, as we have said, is self-consciousness. Intuition leads us to the further conviction that, if there is self-awareness or self-consciousness, there must necessarily be a self or subject. Whatever else the self may be, it is at the very least a subject capable of awareness and of self-awareness. Having accepted the idea of the self as a self-conscious subject, have we not in effect approached very closely to the “I” of Driesch and of Descartes? Nothing is as yet implied with reference to what the “I” may involve in the way of personality. All that is intended is simply to designate “my own self” or “the particular self which is referred to.” Something like that is probably all that Driesch or Descartes had in mind.

I, myself, am a self-conscious subject. So far we seem to have come. I am aware not only of myself but also of something that is not myself. So much further we may proceed on the safe ground of familiar experience and intuition. This separates the self from the not-self and introduces the tremendously important idea of individuality. It makes possible this further comprehensive statement: I am aware of myself as a self-conscious individual. The self is also aware of changes in itself and in its relations to the not-self. That is to say, it is aware of self-experience and extraself experience. It is aware of its own knowledge, of its own intelligence, and of whatever else it may find within itself or without itself. The self's awareness is the very foundation of its being and at the same time the assurance of its reality and the measure of its range and capacity.

The self has an unshakable confidence that its experience is something real and valid. This does not mean that experience always corresponds with reality, but simply that it is itself a reality. Indeed, it is the only reality of which we can be sure. If that be not real, then there is no reality of which we can ever be aware. Experience is the only way by which we may ever come to any reality or even to any appearance of reality. In a word, experience is knowledge, if there is any such thing as knowledge. It is the knowledge which leads to all other possible knowledge. Therefore the self can know itself and can know itself more directly and more intimately than it can ever know anything else. It is our common supposition that, in our endeavor to un-

derstand the world, we should begin with what seems to us the comparatively easy knowledge of material things and values and then, from that secure vantage ground, should push forward as far as we may toward the more remote and more difficult knowledge of our inner being. Quite the contrary is true, and much of our confusion arises from the fact that we begin at the wrong end. Knowledge of the self may, indeed, be the most difficult knowledge and the last, but we are faced by the strange paradox that it is also the first. Knowledge must begin with self, must swing around the circle through the realm of matter and come back to self again. The main point for our present consideration is that the self is capable of experience, that this experience is knowledge, and that the self can therefore know itself. Whatever else the self may be, it is at least whatever it is aware of being, whatever it knows itself to be by its own experience.

When we have come to a realization of the self as essentially a potentiality of awareness, it ought to be clear to us that we are under obligation to judge and interpret it on that basis. Whatever the self may be more than mere awareness must be of the same nature and quality as awareness, namely, immaterial and not material. We cannot by any possibility resolve the self into matter or mechanism. It is not akin to these, and it has a very evident kinship elsewhere. Consciousness, experience, knowledge, thought, for instance, are of the same nature and quality as the self, and this must also be true of whatever else may lie beyond them. We

cannot hope to make any progress toward real knowledge of the self except by seeking for immaterial entities rather than for material entities. These are the essences of which the self is composed.

Matter must be known from the outside. It cannot know itself. Only the self can be self-known. The self can also know matter. Are not the reasons apparent? Matter and knowledge are of different quality and exist on different levels. Self and knowledge are of the same quality and exist on the same level. The higher can know itself and also know the lower; the lower cannot know the higher or even itself. When the self is seeking a knowledge of matter, it is dealing with something different from itself—the material. When it is seeking a knowledge of its own nature, it is dealing with something like itself—the immaterial. If any one should challenge the self with a denial of the immaterial or of any existence beyond matter, it has only to point to itself. It is awareness, and whatever else it is must be at least as immaterial as that. Awareness is a self-evident fact. Is it material? If it is so in any sense, the self might consider itself as material in the same sense. It need not claim or allow anything more than that.

So far we have been speaking only of what might be called the rudimentary elements of the self, of its basic and essential character. In speaking of awareness and even of experience, we have gone hardly at all or only a little way beyond the sort of self that might belong to the higher animals. In speaking of self-consciousness

and self-knowledge, we have of course gone very much farther than that. If such characteristics as these exist at all in the animal, they are of much inferior quality. We have as yet, however, only begun to observe those higher characteristics of the human self which might justify us in thinking of a mind or a soul. Self-knowledge, however, is at least the gateway to that higher realm. If the self can know itself, then the road is open to a wide observation and to a discovery of all the qualities that we are prepared to appreciate. These alone are amply sufficient to justify the conception of the soul.

We may note three interesting aspects of the process of self-knowledge. In the first place, the self realizes itself by its direct acquaintance with what it is. As a subject, it is able to regard itself as an object and to observe its own nature and quality. The very essence of the self is awareness, and it is of the very nature of awareness to perceive what is within it and around it. Thus, whatever the self may be is likely at one time or another to come under its own direct observation. It is perpetually disclosing itself to itself in a vital communion more intimate than any other, a communion continuous and unreserved and private. In a thousand ways, consciously and unconsciously, purposely and inadvertently, by plain hint or subtle suggestion, the self unfolds to itself its own clearer traits and darker meanings. This is the most direct and immediate mode of its self-revelation.

In the second place, the self realizes itself by what

it does. It perceives itself as an active principle. It has reason to believe that it is ever awake, even when in a physical sense it is asleep, that it is ever alert and operative. We are reminded, by analogy, of the atom, seemingly inert, but containing within itself a restless energy, an inherent principle of perpetual motion. Is it self-motion or is it motion induced by some unknown principle of world energy? We do not know, either in the case of the atom or of the self. However this may be, the self does observe its own activity. From that observation, it draws conclusions as to its own nature. Everything that it does becomes further evidence of what it is. In the case of matter, this is the only sort of evidence that we have. We cannot know what matter is except by inference from what it does. We are compelled to judge it from the outside. In the case of the self, this secondary evidence is supplemented by the primary evidence that comes from self-awareness. Self can judge itself both from without and from within.

In the third place, the self realizes itself by what it feels the capacity for doing and being. Matter reveals itself only by what it shows itself able to do. We never know what it can do until it does. It has doubtless much greater capacity than we suppose, but we can never judge it by its unrealized potentialities. With the self, it is otherwise. The self feels assured that it can do more than it has ever done. It feels in a measure its own possibilities. It believes in its own undeveloped capacity. There could hardly be such knowledge except

as it is a judgment concerning the thing itself, made by itself and from within itself. Self-knowledge is the only knowledge that can profess to know potentialities as well as actualities. The self may feel what it "partly is and wholly hopes to be." It finds that it is capable of expectation, of idealization, of aspiration, of wanting to be what it as yet is not. That is a revelation.

The self knows itself first by intuition, and its self-knowledge is enlarged in the same way. Intuition must doubtless continue to be the guide in the pursuit of all further knowledge. Still, the self is not left without enlightenment from other sources. When it has gained the assurance of its own individual existence and of its essential nature and essential powers, it may then pass beyond the simple intuitive appreciation of these to a deliberate and definite study of itself. In some such way it proceeds in trying to understand nature. First there are intuitions concerning the existence of matter and concerning its essential character; then there is practical experience of its workings; then there is science. Knowing that it is capable of self-knowledge, the self may first seek to test its original intuitions and may then endeavor to find out what lies beyond these earlier revelations. It already knows that it is an individual self-conscious self with power to know itself further. It aims to discover what it is more than that.

The most obvious means of systematic self-study is a science of the self analogous to the sciences of nature. This is a science of psychic phenomena, and it is called psychology. Its first and most characteristic method is

that of introspection. The self tries to examine itself by looking within and observing carefully what it sees. It tries to examine other selves by observing what they do and how they act, and it draws from these manifestations such inferences as it may. It analyzes and classifies and strives to build up a just and adequate conception of man's inner nature. This method has had only a limited success. It is hard for the self to make itself both subject and object at the same time; it really is both, but the problem is how to separate the two parts of the psychic whole and make them deliberately and consciously confront each other. It is hard to be sure of the exact nature of any observed phenomena, because while we are watching them they are already becoming something else. It is hard to reach any common ground of agreement as to what the psychic data are.

Introspection has seemed to our modern temper not quite scientific enough. Its observations cannot be weighed or measured; its data cannot be brought into the laboratory and subjected to scientific experiment and verification. Therefore men have tried to develop a technic of objective examination, of strictly scientific study. One of the forms of this is behaviorism. As an exclusive method, it is simply impossible. As supplementary to other methods, it is almost indispensable. It must not assume to bar out introspection. With all its limitation, that will always be necessary. It must not assume to wipe the slate clean and begin by denying the individual self and all psychic phenomena.

The self knows by its own direct experience that it exists, and that it has powers and attributes of an immaterial nature. It wants now to know what more it is. It is sure that whatever there is more will be of the same quality as what it has already experienced—of an immaterial, a spiritual, quality. Intuition has already helped it in its further quest. Introspection has enlarged its knowledge of itself. If scientific psychology can give it further enlightenment, such aid will be welcome. There is, however, no enlightenment to be found by turning our backs upon all that the self already knows concerning itself, by claiming that all this intuitive knowledge is sheer illusion, and by attempting to account for psychic phenomena as mere motions of matter.

The rarest and most precious gift of the true psychologist is not the gift of scientific acumen or the gift of philosophical reflection or the gift of logical discrimination, but rather the gift of imaginative insight. Observation and logical reasoning are comparatively crude methods of understanding and appreciating the spirit that is in man, even as they are but the cruder manifestations of that spirit. There is a delicate and sensitive tact which is the very refinement of the spirit and which is capable of a far subtler perception and of a far truer appreciation. We should not neglect to avail ourselves of the help which may come from the insight of genius or from the finer perception of spiritual natures. It is to be remembered that such witnesses are themselves part of the evidence. Psy-

chology is supposed to be studying human nature, and these are, so to say, specimens of human nature. If a rat could speak and tell of its experience in seeking a piece of cheese through a maze, doubtless the psychologist would listen with rapt attention. Shall he be less attentive when men speak? Shall he not listen most carefully when the speakers are men in whom the psychic life is most highly developed?

One of the most important ways in which the self comes to a larger knowledge of itself is through its contact with the outer world and especially through its intimate association with its own body. We may well suppose that this experience of the self with the not-self is absolutely necessary to its own self-realization, an essential element of its education. The eye cannot see itself, but it can see its reflection in a mirror. So, in a sense, the thinking mind sees its image reflected in the mirror of the external world and thereby comes to know its own features. The self finds it difficult to make itself its own object and to note clearly its own characteristic qualities; but its experience of the relation existing between itself and nature helps it to define and to visualize itself. It observes the interaction between the two and it can make comparison of one with the other. It learns what it can do to nature and what it can do with nature. It learns how it can know nature and how it can make nature serve its own practical or intellectual or ideal ends. It learns what it receives or experiences from nature. By all these means, it becomes more clearly aware of its own peculiar powers and functions and capacities.

The materialist would have us believe that this experience with the material world convinces the self of its own materiality, teaches it that it is simply a part of nature, similar in quality to all the rest. As a matter of fact, is not the lesson quite other than that? Is it not true rather that the self obstinately persists in the deep instinctive conviction that it is different in quality from the material things with which it comes in contact? The voice which speaks to it of likeness between itself and material things is a sophisticated voice, uttering the arguments of a labored logic. The voice of its own direct and immediate experience speaks not of likeness but of difference. The self, for instance, recognizes itself as a knower of nature. On the other hand, it observes that nature has many powers, but not the power to know. Therefore the self instinctively believes that its true kinship is not with material things but with knowledge and consciousness and awareness. It has learned from nature the lesson that there are in the world two modes of existence, matter and spirit, and it only finds itself confirmed in its original conviction that itself is spirit.

The psychologists speak to us of perception and conception and emotion and volition and memory and imagination and other psychic manifestations. Our experience testifies that they are dealing with actual phenomena, by whatever names they may best be called. They are seeking as best they may to describe and explain these functions of the self. Whatever may be the explanations, there are the facts. They are psychic facts, and not material facts. Matter is the instrument

of these human powers and functions but not their essence. Fairly considered, they tend more and more to reveal the self as an individual spiritual entity. Most clearly is this true in the case of the complex and indefinable function of the self which we call thought. It is perhaps to be regarded as the sum or at least the characteristic expression of all the other functions. It is the self acting at the height of all its powers.

We are helpless to define thought, but we know from direct experience that it actually is and something of what it is. There is no fact of the universe more certain. Upon that unique fact our understanding of all other facts depends. It is a fact so amazing in its character and so stupendous in its significance as to be beyond all conception or imagination. From the point of view of material things alone, such a fact simply could not be. Yet, knowing by experience that it is, we cannot now conceive the universe as existing without it. If it were not for thought, the universe, even if it did exist, could never be known. We know well enough from general experience what thought is and what it can do. Its daily manifestations are the sufficient evidence of its great and unique character; the mighty intellectual and ideal structures which it has created are the demonstration of its far-reaching energy. It is the power by which man can contemplate the world, and it is the power by which man can transcend the world. Thought acts in time, and yet thought can transcend time. It reaches back into the past and forward into the future and unites them both in a sort of

universal present. It can transcend space. Thought itself is spaceless, and yet it can dwell within space or pass beyond the bounds of space or invent other spaces which may have no existence except within the realm of thought. It is a part of immediate experience, and yet it can transcend immediate experience and create other experience of its own. It is as familiar to us as our daily bread, and yet it is the supreme miracle of the world.

When we contemplate the self and the nature of the self, when we take into account the attributes and functions revealed by psychology, when we realize the self as a knower and as a thinker, when we consider that all of these elements are bound together in such a way as to constitute organized vital individuality, have we not ample warrant for speaking of the soul? The mere word is not important, but of immense importance is the living fact for which the word stands. Here is self-conscious individuality. Here are amazing powers and functions and capacities. The apparent fact is that the self and all its attributes are of a spiritual rather than of a material quality. Until it can be shown that spirit is only a refinement or an efflorescence of matter, the conception of the soul is natural and reasonable and necessary.

It is at the very least the most credible hypothesis. Moreover, it is a hypothesis that works—the only one that works. It accounts for all the facts, and only an inconsiderable number of the cruder and simpler facts have ever been accounted for in any other way. The

materialist seems to object to a belief in the soul because it seems to him like asking for faith in a miracle. So it is. But then the miracle is there, anyway, whether we believe in the soul or not. Matter and spirit are both miracles, essentially inconceivable and unexplainable. What are we going to do about it? To believe that there is a soul and that the soul can produce thought is to believe in a miracle; but at least it is a consistent miracle—like produces like. To believe that a combination of chemical elements can produce thought or that thought is merely the action of language mechanisms is to believe in a self-contradictory miracle—unlike produces unlike. Apparently we are living in a miraculous world and must believe in some miracle. In which miracle shall we put our faith?

So—if our deepest instincts and intuitions do not fail, if our most inward experience be not all illusion, if our estimate of human faculty and achievement does not bear false witness, if our psychological insight be not devoid of wisdom—we may give ourselves assurance of the firm reality of that lonely ghost which we call the individual soul. It is something more than the indestructible monad of Leibnitz, shut up within itself, yet bound by a “preëstablished harmony” to coöperate with other monads in their ordained task of creating a universe of matter and spirit. It is something more than the indestructible atom of modern physics, hiding within itself an electrical energy which is the source of matter and which leaves spirit to be accounted for as a strange freak of matter or as the manifestation of

another energy as yet unknown. It is more than these, for these are insensible mechanism, and the self-conscious and sensitive soul is more than mechanism. Yet it is as potent as these, for it too can create worlds, and what is more, can understand worlds.

The soul is likewise as self-enclosed and as impenetrable as monad or atom. Every soul is an island. Between it and its fellows lies forever "the unplumbed, salt, estranging sea." It cannot pass beyond its own bounds; it cannot admit any other within its inmost sanctuary. Yet it is not like a prisoner doomed to solitary confinement. It can know what lies beyond its own precincts. It can receive information as to what others know. Mutual intelligence is possible, love is possible, communion is possible. Nothing is more isolated than the soul, yet nothing is capable of wider range or of closer comprehension. It can never yield itself up to any other or receive any other into itself, but it is capable of entering into a fine and rich harmony with other souls and with the world. It sits on its throne in lonely grandeur, absolute monarch of its own domain. Yet it can smile at its own loneliness. Rather, let us say, it is not lonely although it is alone. It can know and think and feel; and on the neutral ground where spirit may meet with spirit, it can realize a rich and satisfying fellowship. Because it belongs to itself, its freedom cannot be violated; because it can commune with other souls, its loneliness is not an imprisonment of darkness but "a glorious privacy of light."

We are told that matter is discontinuous, that there is strictly speaking no absolute contact even of particles, that objects never actually touch. Yet there must be some medium which binds them together while it holds them apart, and that medium is supposed to be the all-permeating and all-embracing ether. The ether touches everything and everywhere and thus establishes the principle of continuity which scientific thought demands. The analogy fairly forces itself upon us. Spirit also is discontinuous. Souls may communicate but never touch. They find their principle of spiritual continuity, not in themselves, but in something beyond themselves. As science needs the hypothesis of the ether, so a spiritual psychology needs the hypothesis of the over-soul.

CHAPTER V

THE INHERITED HOUSE

THIS lonely ghost, the human soul, gradually becomes aware of the fact that it is dwelling in a tabernacle of its own called the material body. The soul instinctively feels the body to be a part of itself. It does not at all follow that soul and body are of the same substance. The apparent fact is that the substance of the soul—whatever that may be—is dependent upon the substance of the body—whatever that may be. The precise nature of this relation man has never been able to find out. The union of body and soul is so close and intimate and vital as to suggest the question whether the soul without the body could even come to know itself. We have seen some reason to believe that the soul does indeed have a certain awareness or consciousness of itself apart from and beyond its awareness of the body; it could hardly become aware of the body until it had first become in some sense aware of itself. Then, too, the soul often seems to transcend any consciousness of the body and to become conscious of itself alone. The body may in a sense define the soul, but it does not seem altogether to prescribe its limits. Yet, even though it does not strictly limit, it does define. The body helps the soul to realize its own nature and

its own powers and thus to understand itself more fully. In very true sense and in very large measure, it helps to reveal the soul to itself.

The superiority of man is not so much a superiority of mere animal organism as it is a superior fitness of his body for the manifestation of mind. Apparently, then, the supreme result of evolution thus far has been the development of spirit within the matrix of matter. May we not, indeed, speak of purpose rather than of mere result, and are we not justified in believing that the continuing process of evolution holds within it further purpose yet to be unfolded? Is it beyond the bounds of a reasonable belief to suppose that the ultimate purpose of human evolution, the ultimate meaning of the world, is the transmutation of matter into spirit? If man could indulge such a view, nature would become to him simply a laboratory for the creation of souls through the working of a divine alchemy. Such a world process might well involve the ultimate freedom of the spirit from all the bonds of matter. Nevertheless, all this is as yet a subject for conjecture or for faith rather than a subject for knowledge. We do not as yet have any actual experience of soul entirely apart from matter.

We know of animal bodies apparently without souls, but we do not know anything of souls except as incarnated in animal bodies. That is the highest reach of evolution thus far, or at least the limit of our knowledge. Naturally, with our present development, we could not see further than that, even if there were

anything to see. It is probable that no creature can understand, or more than dimly feel, a stage of evolution higher than its own. To the dog, man is doubtless a masterful kind of dog. His superiority may be vaguely felt, but the nature of it can hardly be apprehended. To man, God is a superior kind of man, and his nature is to us a mystery. Man can as yet conceive of a disembodied spirit only as a diaphanous body, a sort of impalpable ghost with the shadowy outline of human features. Our conceptions are determined by our present state, but man is convinced that evolution has not come to an end and does not stand still.

Man must be content with the limitations imposed upon his knowledge by the stage of development to which he belongs. However far he may extend his knowledge, these fixed limitations he cannot transcend. What evolution may still have in reserve for him and for the world, he cannot know. It is beyond his definite knowledge, beyond the reach even of his reasoned thought, and can be glimpsed only by his faith. Man does, however, know something of the stupendous evolutionary drama that has so far unfolded itself, and he dares to cherish in all humility the confidence that its hero is not "the conqueror worm" but the human soul. From time to time, other heroes have held in succession the center of the stage. There was first of all, for instance, the atom with its electrical energy, then the sun-star with its wheeling planets, then the drop of protoplasm with its potency of life, then the vegetable organism with its flower and fruitage and reproductive

seed, then the animal organism with its free activity and voluntary motion. At last, in the fullness of time, all these have yielded their primacy to the thinking mind.

Seeing that all evolution appears to have worked toward human life and human mind, man wonders now whether it is to make its further progress by passing beyond him or by raising him in the scale of being. That is a question to which he finds no answer. Of one thing only he is assured. Whatever other hero there may yet be, man is the hero thus far. This is due to the fact that man is mind. "The whole creation groaneth and travaileth in pain together until now." Together with man, it is still travailing and "waiting for the adoption, to wit, the redemption of our body." This mystic and symbolic utterance accords with our best scientific knowledge, includes our conception of world development and passes beyond it. It seems to suggest that there is a mighty creative process working toward a spiritual goal. Before Darwin had written, Emerson's poetic insight had already guessed the secret and expressed the meaning of all the evolution of life that lies behind us:

Striving to be man, the worm
Mounts through all the spires of form.

Doubtless the worm still strives, but striving has also been lifted to a higher level. Striving to be as God, the human soul mounts the heights of material being, soars into the higher regions of thought and of psychic

experience, aspires to pass beyond these into the life of pure spirit.

In the meantime, the soul dwells in a physical body. It did not create that body for itself but has received it as an inheritance from a long line of ancestry. The ancestry goes back not only to the animal but to the dust, to the atom and its radiant centers of electrical energy. Evolution has been at work through inconceivable ages producing the human body as a fit dwelling for the habitation of the human spirit. Yet if any observer could have watched all the earlier stages of the evolutionary process, he could never have had any possible inkling of the ultimate goal. Evolution, as we commonly understand the term, has two great phases or aspects. There is, in the first place, cosmic evolution. This has reference to the development of inanimate matter, the growth of the material universe. Consider for a moment Herbert Spencer's famous definition: "Evolution is an integration of matter and concomitant dissipation of motion, during which the matter passes from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity, and during which the retained motion undergoes a parallel transformation." How could an observer, with such a conception of evolution in his mind, by any possibility have foreseen that the "integration" ever would involve such a thing as life—or mind?

When the factor of life is introduced, we have a vastly different kind of development, namely biological evolution. That has to do with the evolution of life in

all its forms. Let us suppose that an observer, with a scientific definition of biological evolution in his mind, could have watched the development of vegetable and animal life through its earlier and even through its later stages. Could he by any possibility have foreseen its goal? Could he in any way have predicted mind, could he even have conceived such a thing as mind, until some trace of mind had actually appeared in the stream of life? With the introduction of life into the world, evolution is at last ready to start on its way toward man. Yet still how far to go. The human mind is staggered at the thought of the vast reaches of time and of the multitudinous variations of living forces as nature feels her slow way and makes her patient experiments. How long it takes her to come to the vertebrates and what a variety of experiments she makes in that field before she accomplishes her end. How long it takes her to set the animal erect on two feet and to give him hands instead of paws. How long it takes her to develop a competent brain and then to refine its quality. At last, however, she is ready with the organism which is fitted to be the medium and the instrument of the soul in its many dealings with the material world. It is an animal body, but marvelously complex and refined, the most delicately balanced and most finely adjusted and most subtly responsive of all instruments.

What especially qualifies the human body for its higher purposes is a finer and more complex nervous system and a more fully developed brain. Here biological evolution has achieved its masterpiece of

ingenuity and refinement and adaptability. Here there is a fuller revelation of the significance and the potency of life. With the human organism, a new factor enters into life and psychic evolution begins. Soul emerges from life as life has emerged from matter. In each case, something new was added and a higher stage of evolution was begun. At present, the supreme fact of the world is this union of soul and body. The soul has found a house for itself, and from its windows it may look out upon the world. The soul is capable of knowledge, it is capable of experience, it is capable of self-education. The body is its dwelling and its school.

When the human soul first becomes aware of its body, it is probably as with "a dim and undetermined sense of unknown modes of being." We may be sure that no human memory holds the distinct record of that first faint awaking of consciousness to the presence of itself and its environment. Only in the backward light of after knowledge can we discern something of what that earliest experience must have been. It was doubtless mere awareness, with as yet no distinct feeling that could be called consciousness or self-consciousness. We may conceive it as a blind instinctive feeling of a self coming into contact with a not-self which was at the same time somehow a part of the self. The body is there, it produces sensations, these sensations are felt and responded to, something acts upon the body. There is something more than a mere mechanical action and reaction. Yet the soul takes no distinct cognizance of what it receives or what it does. Something like

that, at any rate, is what we seem to distinguish as we look backward into the abyss of being, peering as far as we may into the darkness which is just beginning to be tremulous with the first premonitions of a coming dawn, into a region where there is as yet "no light but rather darkness visible."

Gradually but surely the light of the new consciousness grows, as though shining through darkness from a region beyond. What stars may be fading out in that twilight of the soul, we cannot know. If there be a light beyond, there is also a veil of darkness which our actual experience cannot pierce. What seems rather to be the fact is that the soul is born in darkness and only gradually emerges into light. One amazing fact, however, becomes clear. That light is its own. The soul has the power to become self-luminous. Its acquaintance with matter through the body is simply one of the modes of its self-enlightenment.

This acquaintance of the soul with the body and the external world is a gradual and a progressive one. At first, the soul simply feels the body in a vague and general sort of way as the source of its sensations and the means of its actions. It probably feels it as a whole, without much localizing of sense or function. More and more, however, it comes to a detailed realization and a definite knowledge. This of course has various degrees, according as the soul merely accepts the superficial and naïve appearance of things or sets itself more or less strenuously and successfully to the task of self-education and self-analysis. It may be little more than

the knowledge which an animal has of its own body, the concrete knowledge of a physical self which can be made to serve its particular practical needs in the world. Such practical acquaintance is, of course, only the rudimentary beginning of knowledge.

Man is capable of knowing, and does know, very much more than that. When he uses all his opportunities, he finds a much larger field of study. When he brings to bear all his intelligence, all his powers of observation and analysis and inference, he finds possible a deeper and a wider and a more detailed understanding. Such closer knowledge he has sought in at least three very important and successful ways. The most precise and most fundamental of these is the way of natural science. Here man has sought to investigate the body in its actual physical structure and functions. Through physiology and its auxiliary sciences, he has delved deep into the living animal organism and has accumulated a vast store of valuable knowledge concerning the human body. He is still carrying forward his successful explorations.

Then there is the psychological way. That is in part scientific, seeking a knowledge of man through an investigation of his actual physical behavior. This method has shown us much as to what the body does, through its own natural impulse or through the impulse of instinct or thought or feeling. It has not shown us much as to why these things are done, or in other words, as to the relation between the body and the soul. For this, we must look rather to introspection, with its

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keen and searching observation of man's inner life.

A third way in which man has sought to probe the mystery of the soul in the body is the way of philosophy. What is essentially involved here is the consideration of the human problem in the light of the pure reason. Basing itself upon all that can be learned by scientific observation and psychological insight, philosophy proceeds to inquire what it is possible for man to think about his own dual nature. Philosophy may not have much to tell us about man's physical organism as such, but it has many things to say about matter and spirit and life and consciousness and knowledge and thought.

From these various sources, the soul may come to a fairly comprehensive knowledge of the body which it inhabits and may learn at least something as to the actual relation which exists between them. With respect to the latter, it can have immediate experience, and upon this it must in large measure rely. That experience will of course be all the richer and clearer in proportion as it is enlightened by all possible knowledge. It is probably first an experience of mere sensation, of physical impressions received through the body and in some way apprehended by the soul. In time, the mind comes to distinguish sensation of various kinds and to associate it very definitely with various parts of the body. Sensation thus comes to present itself in a new light. It is no longer merely a physical effect but something realized by the mind.

The mind not only learns to know sensation but also

learns to know the difference between sensation and knowledge. It knows that it feels, and it knows that it knows the feeling. Sensation cannot create and cannot include knowledge, but knowledge can evidently include sensation and can almost be said to have the power to create it. Ralph Connor, in *The Doctor*, tells a humorous story of a little Englishman who had had his foot amputated at the ankle and who still continued to feel a pain in his toes. The man's old father was immensely puzzled by this strange situation, and the doctor tried to explain to him that the pain was felt not really in the toes but in the brain, the mind. "Don't 'is mind know 'e hain't got no toes, doctor? 'Ow can 'is mind feel 'is toes 'urt w'en 'is mind knows 'e hain't got no toes to 'urt?" The exasperated doctor finally despairs of making such an abstruse matter clear to the ignorant but pertinacious elder and has to take refuge in the acknowledgment that we don't understand these things very well. "'Well, doctor,' sez father, 'it would 'a' saved a lot of trouble if yeh'd said so at the first.' " The problem is something more than a puzzle for an untutored mind. It involves not so much the relation of the mind to the toes as the relation of the mind to the brain. The brain says that the toes hurt; the mind says that there are no toes and that therefore they cannot hurt. The mind has power to correct the brain and to make clear the nature of its mistake.

To speak of sensation is to speak of a general idea, but it is one that can be translated by every human experience into a multitude of concrete and vivid

details. Even then, however, how limited is our conception of its full significance. Sensation primarily implies a certain chain of physical phenomena; but its deeper meaning implies man's conscious appreciation of these external facts and his power to transmute them into something which is akin to the quality of the spirit rather than to the quality of the flesh. Certain physical facts may be transmuted into pain, and others may be transmuted into pleasure. No one needs to be told how much of man's conscious life is bound up in those two kinds of sensation or how infinitely varied may be their particular forms. No one needs to be told how much more than mere physical reaction they may become or how largely they may affect man's psychic life. They lead to suffering or to enjoyment, and it is the soul that suffers or enjoys.

Something of the same kind is likewise true of the greater part of the manifold influences that come to us from the body. There are, for instance, the influences arising from the automatic vital processes. On the one hand, the mind is affected by these at every instant and in countless ways—quickened or retarded, depressed or exalted, dulled or refined. On the other hand, the mind has an alchemy of its own whereby it compels them to undergo "a sea change into something rich and strange." Then there are what we commonly speak of as the five senses. Science has made the matter infinitely more complex than that; but these five great avenues of access into the precincts of the soul will serve all needful purposes of illustration or rather of suggestion.

The fundamental and most generally diffused bodily sense is that of touch. The surface of the body at practically every point is capable of coming into contact with material objects and of receiving from them a great variety of impressions. For the most part, the sense of touch seems to be associated with man's animal nature and to serve his practical need. It has less to offer for the nourishment of his higher instincts and impulses. Yet it does not stop altogether on the physical or animal level. It is capable of an exquisite sensitiveness and refinement, can produce pleasure or pain, can arouse subtlest associations, can evoke sentiments and ideas. It contributes not a little to man's intellectual and spiritual life.

The sense of taste is much less general than the sense of touch. It is more definitely localized and is narrower in its range of effects. It is closely connected with the practical need of the body itself and seems fitted to serve the ends of use rather than the ends of knowledge. It is more limited in its possibilities and has less significance in its revelations. Yet, considered simply in itself, what a wonderful sense it is. When certain substances are put into the mouth, they affect the end-organs called taste-buds and corresponding effects are conveyed through the nerves to the brain and are apprehended by the mind as sensations. The effect is not to be described and can be appreciated only by actual experience. If we had never tasted, we could not even conceive the meaning of taste.

The sense of smell is also definitely localized. Cer-

tain end-organs in the nostrils are capable of being affected in a way that is peculiar and characteristic. The sensations are more nearly analogous to those of taste than to any others, but they are in a distinct class by themselves and are not to be mistaken or confused with anything else. They are of great variety and are often very subtle. One point of interest about them is that there is comparatively little direct contact of the organs with the objects causing the sensations. These objects send forth emanations which affect the organs through the atmosphere. The results may often be extremely disagreeable or even disgusting; but on the other hand, they may often arouse a feeling of exquisite sensuous delight.

The sense of hearing is concerned with the perception of sounds. Sound arises from certain vibrations of matter; but the vibration itself is not sound and does not become sound until it has affected an ear. Nor is it sound even then. In order to become sound, it must first be passed from the ear to the brain and to the mind. To the thinking mind, sound may become science, may become knowledge; to the imagination, sound may become art, may become beauty. Whatever may be the reasons, sound surpasses all the other physical sensations in its power to arouse the emotions. It can set up spiritual vibrations as overtones to the physical vibrations. This susceptibility to the influence of sound would seem to lie very deep in our nature. It also reaches very high. It is the secret of the wonderful power of music and, to a large extent, of poetry.

Quite as much or more is true of the sense of sight.

Nowhere are the physical organs of sense more refined or the actual physical phenomena more wonderful. Nowhere are the spiritual implications more suggestive and significant. Light, the eye, vision—the literal meaning of the words is representative of nature in her most miraculous moods; the figurative meaning of them is symbolic of mind in its most glorious moments. The soul does not rest content with simply receiving impressions through the sense of sight. It also finds in these the materials for its own activity. It is impelled to mold them into shapes which embody its own inward visions. No such impulse would necessarily or naturally arise from any causes inherent in the physical phenomena themselves. It arises rather from the soul's own nature, from its instinct to create an ideal world, to embody its own thought and feeling.

The body of man is a living organism, and it has its vital organs whose function it is to attend to the business of life. This they do for the most part automatically. Aside from certain incidental cares and aids, the vital organs operate themselves. Under normal conditions, food is assimilated, wastage is eliminated, sleep comes at due periods, health is preserved, proper balance is kept between various forces and functions, all by virtue of the body's inherent vitality. The heart beats and the blood flows with an unconscious regularity varying only within narrow limits; and this activity does not cease for a single instant throughout a whole lifetime. The lungs breathe with a similar regularity and constancy, furnishing just the supply of air that is necessary to life. The digestive apparatus, the glands,

the liver, the kidneys, all go about their special business quietly and imperceptibly. The whole organism works together without undue friction to accomplish the ends of life and growth. So long as this efficient harmony is maintained, all is well. When any vital organ fails, the body perishes.

The organism works also toward the end of reproducing its kind and continuing the succession of life. Here the action is more intermittent and somewhat less automatic. The body works automatically in the preparation of seed or sperm. Then the will intervenes for a moment to bring about the union of the two sexes. Then the automatic action is resumed in the development and birth of the embryo. Then it ceases in this form, and the processes of vital preparation go on as before, looking forward toward new acts of reproduction. These reproductive processes might be classed with the other vital processes as purely automatic if it were not for that momentary intervention of the will. For the body, that is merely incidental, just a jog of the machinery which enables it to keep on with its automatic action. For the soul, it is of surpassing importance. In spite of all the automatic physical machinery, the reproduction of life could not go on if it were not for just that voluntary intervention. The body was able to operate itself. In the supreme fact of continuing the body's life beyond itself, it was necessary for the soul to intervene with an act of conscious will.

Consider, furthermore, what the soul has been able

to make out of this one break in the automatic process. It has built up the conception and the fact of sexual love with all its emotional and ideal consequences. To the materialistic mind, love may seem to be nothing more than sexual desire. It is indeed built upon that, but it is vastly more than that. It is in very truth all that the human soul has been able to make out of it. The physical phenomena are there, and they are not to be denied. It is quite as true that the spiritual phenomena are also there and that these are not any more to be denied. For the body, it may be true that love is nothing more than physical impulse, looking toward the end of the reproduction of life. For the soul, it is equally true that love is ecstasy, beauty, devotion, self-surrender, looking toward the higher end of spiritual union and the enlargement of spiritual life. On the one side, love is among the greatest of all physical facts; on the other side, by virtue of the soul, it has become surely the greatest of all spiritual facts.

Still another important factor in the life of the body is its muscular system. This is the body's equipment for movement and for action. It works to a considerable extent in an automatic and unconscious manner, as for instance in controlling the movement of certain vital organs, such as the heart and the lungs. Also operating below the level of consciousness are certain reflex actions of the muscles. There are those who would have us believe that the muscular activity of the body never rises above this automatic or quasi-automatic level; but the obvious facts of our daily experience give

us good ground of reason to believe otherwise. If we have any knowledge upon which we can rely, we know that the mind does exercise over the muscular action of the body a large measure of direction and control. If the mind be not literally the cause of action, it is at least the occasion of action. It can release or restrain the power that produces bodily movement.

Part of this directed activity has to do with the needs of the body, but part of it is determined by some need or purpose of the mind itself. The body needs food and the body can walk, but the body needs to be directed by the mind where to go and get its dinner. The mind, furthermore, has plans and intentions which concern only itself. It cannot carry them out without the aid of the body, but it can direct the body to act in such a way as to further the mind's purpose. That purpose may have no particular interest for the body as such, it may be a purely intellectual or spiritual purpose; but if any action of the body can serve the ends in view, the mind has the power to command that service. Human activity bears the unmistakable stamp of mind.

Even more important and more significant than the muscular system, is the nervous system. We have in turn contemplated for a moment the mystery of sensation, the mystery of reproduction, the mystery of action. Here we come to a deeper gulf than any, for beneath this lowest deep there opens wide the lower deep of the mysterious relation between the body and the soul, between matter and spirit. The nervous sys-

tem of the human body brings us very close to this profound mystery. In the first place, it is the necessary medium of all sensation. It has its receptors which are open to all the impressions of sense. Through some power as yet unknown, these impressions are carried along the nerves. These nerves meet in a common center. Various centers are linked by nerves to more important centers, and these in turn are united in centers of still higher degree. The complicated network meets in the common center of the spinal cord, and from there, nerves pass on to the brain. These are the so-called afferent nerves. There is a complementary network of efferent nerves whose function it is to carry outward the impulses which set in motion the muscular system. Through these, the nervous system becomes likewise the necessary medium of all action.

The materialistic view is that this whole system is purely mechanical. The body is acted upon and then reacts according to the laws of physical cause and effect. Action and reaction are equal, just as when one billiard ball strikes another. This is perhaps partly true. At any rate, some impressions seem to get only so far as one of the lower centers and there meet with an automatic response. In other cases, while the automatic response occurs, the impression itself seems to be carried further, sometimes with further response and sometimes not. These automatic responses illustrate what is called reflex action. There are also "conditioned reflexes." For instance, an animal is moved to certain actions by the sight of food. If a bell is rung every

time the food is presented, the animal will soon come to perform these same actions when it hears the sound of the bell. One cause has been substituted for another. It has been argued that man's higher modes of action are simply conditioned reflexes derived from his lower mechanical modes of action. The conception probably has an element of truth, but it is far from adequate when offered as a complete explanation. The higher the centers that are concerned, the less does reflex action of any kind seem to be purely mechanical and the more there seems to enter in an element of what might be called purposive response. Finally, in the highest center of all, sensation emerges into a clear light of conscious appreciation, and response appears as something consciously willed.

The organ of conscious perception and volition is the brain. Presumably there are impressions made upon the nerves which the brain never perceives and which it is perhaps incapable of perceiving. It seems clear that some impressions are stopped in course of transmission and never get through to the brain. Lower centers take care of the matter and react of their own motion. Sometimes the brain receives the impression and is aware of what is going on, but does not interfere or exercise its power to prevent or to allow or to modify. Sometimes the brain exercises its prerogative to take full charge of the matter, not only receiving the impression in full but exercising full authority and assuming full responsibility for decision and direction and control. It is as though the brain were a sovereign

power at the center, capable of acting for itself or of allowing its subordinates to act in its stead.

The brain has a further power, which its subordinates do not possess, the power of acting consciously. It is not conscious of itself as an organ or of the nervous system as its instrument, but it is conscious of impressions received and of directions given. Here we come to the point where it is difficult any longer to speak of brain and where we are almost forced to speak of mind. The problem presented is a serious one. On the one hand, there is the view that mind is nothing but brain, and on the other, the view that brain is merely an instrument of mind. Either view presents grave difficulties. The apparent fact is that mind is vitally and organically associated with brain and that brain mysteriously transmutes itself into mind. When we think of physical function, we must speak of brain. When we think of consciousness and thought, we must speak of mind.

Whatever may be the nature of the relation between brain and mind, one claim at least may be made with assurance. Whenever impressions are admitted into the brain, they are subject to a possible transmutation. They may be raised to a level higher than their own and may be infused with a quality which associates them not with matter but with spirit. Sensation becomes experience. Likewise, when the responses of the brain take the form of conscious decision and volition and direction, we have to do with something more than mere physical reactions. Action becomes purpose

and intention. Over and above all this, the mind is able to use the brain as something more than a center of reception and distribution in the service of the body. It can turn the energy of the brain away from bodily needs toward intellectual ends and spiritual values. Out of the impressions which it receives, it can choose to produce, not merely a certain amount of physical activity, but a scientific investigation, a philosophical treatise, a work of art. The lower nervous centers may produce simply reflex action, but the mind is capable of producing reflective action.

This, then, is the inherited house of the human body, built by nature as a fit place for the indwelling of the human soul. It is something more than a mere covering shell, guarding a certain space for protection and seclusion. It is a living house, a complex organism, equipped with instruments and functions of its own and informed with its own inherent energy. As a mere animal organism, it is in a sense self-sufficient; but it is also adapted to be the dwelling place of a vital spirit whose life shall merge with its own life in an organic union. Only in that intimate association does it realize and reveal its own highest possibilities. This adaptation of the body for its destined use is the result of age-long processes of evolution. It is simply unbelievable that it should have been the outcome of mere chance. If it is difficult to believe in design and purpose, it is still more difficult to believe in any "fortuitous concourse of atoms." If it be not mere chance, has nature, then, worked with a purblind energy

toward an end dimly foreseen but now made apparent in the fullness of time? If there was this much of foresight and purpose, surely there must have been something more. Shall we not say that, if nature has been at such cost to provide a house for the spirit, it must be because there was spirit that needed a house?

It may be that spirit has itself helped to create its own dwelling place. Feeling the need of a material embodiment, seeking an incarnation in some suitable tabernacle of flesh, finding a rudimentary expression of its nature through animal organism, remolding that organism nearer to its desire, it may actually have contributed to mold and shape and develop the human body. Thus life has entered into matter and has changed it into organism. If there be soul, what is there strange in the thought that it should put forth an equal power? If we can conceive of the soul as exerting such an influence upon the body, we may also conceive that the work is not yet completed. The body, through its association with the spirit, may still be acquiring powers and habits not native to itself, may be undergoing processes of improvement and refinement which shall make it a more perfect organ of the soul.

Through the body, the soul comes into intimate contact with matter and learns something of its nature. It learns to know physical life. It receives a multitude of vivid impressions, learns how to translate these into thought and action, and exercise upon them its own native powers. It is learning to know at least one part of the world in which it lives and perhaps it is thereby

ultimately preparing itself for a better knowledge of that part of the world which is outside the bounds of matter. For all these purposes, the body is marvelously well adapted. It can serve the soul's desire for knowledge and also at the same time the soul's desire for action. From eye and ear and finger tip, from all parts of the body, a thousand nerves run to the brain. From the brain, a thousand nerves run out in all directions. The brain itself is the medium between the body which feels and acts and the soul which knows and thinks. In this wonderful living organism which is its dwelling, the soul has found not merely a form and a shelter but an organ and an instrument not unworthy of itself and its higher purpose.

CHAPTER VI

OTHERNESS

THE soul is conscious of itself and of its own inner life and activity; it is also conscious of being in touch with something that is other than itself. The soul's first experience of this sort is with its own body. The relation between soul and body is unique. They are parts of the same self. Yet, although the body is in some sense subjective, it is at the same time objective; it is at once self and other. As the soul lives its life in the body, its naïve and instinctive experience is that soul and body are one. When it deliberately stops to consider the situation, it is able to realize the body as a part of its objective world. It can, so to say, hold the body off at arm's length and examine it like any other object.

This observation of the body may take on the thoroughness of scientific investigation. Bodies may be dissected in order to study their structure and their function. It is an obvious limitation on such a study that life and spirit disappear in the process and that the union of soul and body is dissolved. There may be not a little difference between living bodies and dead bodies, between soulful bodies and bodies unsouled. Something may be lost which is vitally important to full

understanding. Much about the body must remain concealed, because every attempt to approach it gives it an opportunity to escape. Short of this, however, it is possible to make some examination of living tissue and organs while they are still alive. In one way or another, we can learn very much about the body from scientific observers. The psychologist may carry scientific investigation still further and may discover many things concerning the influence of body on mind. In scores of modes, the body may be considered and examined in a purely objective way. It becomes sufficiently evident that body and soul, however much they may be one, are also two. To the soul, the body is an other.

Still, the notable fact remains that, to its own soul, an individual body is unique in its otherness. It is a fact of singular and far-reaching significance. Of all things external to the soul, its own body alone can be known directly and in immediate experience. Another point of interest is that the soul could not know anything else without first knowing its own body but might conceivably know its own body without knowing anything else. The body is the necessary medium of information through which the soul attains to all its knowledge of other things. It also furnishes the experience and the criteria by which all other things are to be judged and interpreted. The soul must first be acquainted with its body as a subject and must then learn to know other objects before it can fully realize its own body as also an object. So the soul's first acquaintance

with otherness is at least in part an acquaintance with something that is in a sense itself or so intimate a possession and companion that it is hardly to be distinguished from itself.

Each particular body, then, occupies a peculiar situation and performs a peculiar function with reference to each particular soul. It presents a sort of intermediate state between the self and complete otherness. This offers a curious problem of being. Yet the soul may well find in just this indescribable situation a notable advantage. Without this intermediate stage, there would probably be an impassable gulf between the self and the not-self. The fact seems to be that the soul has no power to apprehend otherness directly but is able to do so only through a medium which partakes of the character of both. In this very fact we may possibly touch the secret of the soul's power to identify itself in some sort with matter or to see reflected in matter something of its own image. It may be this same fact which enables the soul to set upon matter its own impress, to transmute matter into its own likeness, to endue matter with its own values, and thus in a very true sense to make even the external world a part of itself.

When the soul looks out of the windows of its house, it becomes consciously aware of a strange new world. What it discovers is alien from its own nature but not altogether alien from the nature of the body with which the soul has already become acquainted. The body can put itself on familiar terms with what it

finds outside. Just how far these impressions correspond accurately and completely with any external reality, there is no means of knowing. The mind knows and can know only its own experience. That experience is of certain sensations and perceptions arising from the impulses conveyed by the nerves and the brain.

In practical living, we trust these sensations and perceptions and rely upon them as a basis for thought and action. Judged by the results of such tests, they seem to justify our confidence in their reality. The mind draws the natural inference that they are worthy of credence, that their report as to the external world is in the main reliable. It acts upon the conviction that there is a necessary correspondence between itself and the otherness, that the mind is fitted to perceive the world and that "the external world is fitted to the mind." At least the mind is fitted to the body, and the body is fitted to the external world with which it is akin. Thus is established the harmony which is essential to knowledge and to life. What, then, does the body have to say to the mind concerning the otherness which the body partly shares but which in vastly greater part lies beyond the body itself? The simple answer of naïve experience is to be found in the evidence of the senses.

Through the sense of touch, the body comes into a direct and immediate contact with external objects. Concerning these it bears a great variety of positive testimony. It says that things are hard or soft, long or short, round or square or irregular, elastic or inelastic,

thin or thick, rare or dense, light or heavy, gaseous or fluid or solid, and so on. Of these various qualities or characteristics, it notes a thousand shades. The sense of touch also testifies that these external objects may exert pressure or offer resistance. Sometimes the objects themselves are at a distance, but can nevertheless produce certain impressions through the intervening atmosphere, as in the feeling of temperature or what we call heat or cold. These effects on the body through the sense of touch are exerted over a very wide range of relative intensity. Sometimes they are so slight as not to be consciously perceptible. Sometimes they are barely felt or felt as it were subconsciously. Within their normal range, they are likely to be definite and clear. Beyond their normal range, they may become so intense as to injure or even destroy the body. In all their forms and in all their degrees, they are the bearers of information concerning the existence and nature of objects. Their impressions are a contribution to knowledge. Perhaps none of the senses conveys a stronger sense of reality. We firmly believe that what we touch and feel is actually there and that it has the qualities which our sense of touch reports.

The sense of taste affords still another means of contact with the outer world and still another assurance of its real existence. Taste applies only to a limited number of objects which can be put into the mouth or touched by the tongue, but concerning these it reports effects which are strong and distinctive. The object may be felt in the mouth by the sense of touch, but the

added sense of taste is something different and peculiar. Perhaps if it stood entirely alone, it might not give a very strong feeling of reality; but when reality is once assured by the other senses, taste reports confidently of an added quality in objects which no other sense can discern. Concerning some objects, it gives a negative report; these are lacking in the special quality which can produce the sensation of taste. The distinction is an interesting and instructive one from a theoretical point of view, but it gains its chief importance as an eminently useful one in connection with our practical life. Taste probably helps in adding to our sense of physical reality, and it doubtless contributes not a little to our knowledge of the nature and the quality of material objects.

It seems probable that the sense of smell, like the sense of taste, would not be very reliable as a sole basis on which to rest our conviction of physical reality. It does, however, give us a good deal of information as to what objects are in their own nature. It assures us as to their possession of certain qualities. Some objects do not affect the sense of smell at all. Some affect it in a very disagreeable or painful manner. Others affect it in a way that is highly agreeable and pleasurable. The range of possible effects is very great and the discriminations are often very fine and delicate. Smell seems on the whole to be more useful to animals than it is to man, as though, in the course of evolution, its functions had once been relatively more important but had been partly taken over by other senses. It

might be inferred that the sense of smell is more naturally associated with lower kinds of needs or with merely animal organisms or with more sensuous human natures. A further inference would be that the processes of evolution have favored the use and the development of other senses because these have been found better adapted to the characteristic needs of beings living upon a higher intellectual or spiritual level. In any case, the sense of smell, whatever may be its relative rank or significance, is an important part of the body's sensitiveness to the facts of the external world. It therefore makes some contribution to man's knowledge and to his assurance of the real existence of the otherness.

The sense of hearing seems still more remote and indirect in its testimony concerning the outer world. It does not necessarily arise from any immediate contact with objects or from any specific quality residing in substances or emanating from them. What we learn directly is that something in nature is capable of producing the effect called sound. By indirect means, we learn later that this is due to vibrations in material objects. When the vibrations are either too slow or too rapid, the ear is not able to perceive them, and there is therefore no sound. Rate of vibration also determines the quality of sound which is called pitch. Other qualities are determined by the nature of the vibrating object—a bell, a harp string, a bird's note, or what not. Here we come upon an interesting and immensely significant phenomenon of human experience with sound. This is the amazing effect produced by the con-

cord of sounds as distinguished from a simple succession of sounds or from a discordant medley. The rôle of harmony in music will sufficiently illustrate its immense importance. Sound may give us comparatively little help in understanding what objects are, but it greatly extends our knowledge as to what they are capable of doing. It is thus indispensable to our acquaintance with otherness.

Evolution has developed the eyes to appreciate certain phases of external reality which only such organs could perceive. The eyes match a unique fact of nature, namely, light. In vision, there is no contact of the eye with the object, no specific quality in the object which causes visibility, no emanation or vibration through the atmosphere. Light is much more subtle than any of these material causes. Light falls everywhere and is not perceived as light; it falls upon the eye and produces the sensation called vision. By this singular power, we see the outlines and forms of objects. We see them in different colors, according to the particular rays of light which are reflected to the eye. The pure white light, which involves all the visible rays in unison, can be divided by refraction into the various colors of the spectrum, each of which involves only its own particular group of rays. Another interesting phenomenon of vision is perspective. Objects diminish in apparent size as they recede from the eye. Through experience, we learn to judge of distance by apparent size. The scientific study of vision and of the eye discloses many wonderful phenomena. Practical experience makes us

aware of sight as the finest and subtlest and most significant of all the senses.

The senses reveal to us only sensations. Sensations are something felt in and by the mind. This seems to carry us back again away from the external world into the inner world. Do the senses, then, indicate any external reality in themselves or beyond themselves? Is there any otherness or is there only an appearance or an illusion of otherness? To such a question no final answer can be given, but we may offer the tentative answer that these sensations are undoubtedly a part of experience. Now, if there is any such thing as reality, experience is reality. Even illusion is a real experience so long as we really have the illusion. We really do experience sensations, really do experience a definite impression of otherness, and therefore they are at least realities of our experience. It is at least a good working hypothesis that we should not experience them unless they were there to be experienced. It is hardly a tenable position that the whole world is simply an illusory dream from which we never wake.

Man has a profound and probably unshakable conviction that his real experience of a seeming reality rests, either directly or indirectly, upon a veritable reality. Such a conviction is strengthened and confirmed by all the tests we know—by practical life, by scientific investigation, by philosophical reasoning. Sometimes a Shakespeare may tell us that "we are such stuff as dreams are made on," or a Calderon may declare that "life is a dream"; but this is in their moments of poetic

fancy rather than in their moments of poetic insight. On the whole, the hypothesis of real external existence rests upon solid grounds and is fairly well established. Perhaps we can never hope to get farther than that. Absolute truth is as yet beyond our reach. Meanwhile, we may take it for granted that the body is real, that its senses and sensations are real, that the organs of sense are real, and that all of these convey to us reliable knowledge of reality beyond themselves. There is real otherness.

Even if we can assume that the external world is real, can we also take it for granted that that reality is at all like what the senses seem to indicate to us? In other words, is the testimony of the senses to be accepted as reliable evidence? We know, of course, that the senses are not infallible. Experience shows us clearly that they do make many and serious mistakes. Not only are they imperfect in themselves, but they can be affected and led into error by the emotions, by preconceptions and preoccupations, by disturbances of the body or of the mind. All of which goes to show that they are not mere mechanical instruments of precision but parts of a living organism in which both sense and soul are dependent upon each other. The errors of the senses are clearly exceptional and do not seriously affect the main question. On the whole, they give us evidence which stands the test of investigation.

We may fairly believe that under normal conditions the senses tell us the truth so far as they go. Any lack of reliability is due not so much to their mistakes as to

their limitations. They can tell us a part of the truth but not the whole truth. The world revealed to us by the senses is of course the world of naïve experience, the world of things which can be felt and tasted and smelt and heard and seen. It is the world which appears. It must not be assumed, however, that appearance is necessarily the antithesis of reality. It is rather a part of reality or is reality imperfectly understood. No one, of course, will claim that the senses give us absolute and ultimate and complete reality. It is sufficient if they serve our practical need and take us a little way on the road toward fullness of knowledge. This we may veritably believe that they do.

Why should we believe otherwise? The world seems to be intelligible, it seems to be truly a universe in which part is adapted to part, it seems to have consistency and orderly development. If it has produced material reality and has also produced mind able to cognize that reality, is it not altogether likely that matter and mind are practically adapted to each other? Is not matter fitted to be understood and is not mind fitted to understand? It is hardly thinkable that two such realities should exist side by side in the world without being able to come together according to their essential natures. If the senses are not reliable, how did they come to be and what are they for? Are they mere freaks of the creative force? This would seem to make the universe a senseless joke. Maybe it is, but the natural presumption is otherwise. It may be freely granted that the senses touch merely the surface of

things, but the surface is part of what we wish to understand.

Science professes to survey this same surface more accurately and also to delve beneath the surface. Do its researches tend to discredit or to confirm the accuracy of the testimony given by the senses? Of course it does both. It must first, however, confirm before it can discredit, for it must use the senses and trust them even in the very process of subjecting them to test and correction. The senses, in fact, are absolutely necessary to science in its study of the external world. Without them, it could not even begin its investigations; and at almost every step they furnish indispensable aid. They are indeed its very means of approach to the objects which it wishes to study. If it were not for the senses, science would have no physical data on which to work. Therefore science could not deny the senses without denying itself. It can correct and extend their information, but that is all.

One of the characteristic methods of science is to invent instruments by whose aid the power of the senses may be increased and made more accurate. The microscope and the telescope are simply devices for extending the power of the eye beyond its normal limits. If the eye were capable of microscopic or telescopic vision, these instruments would of course be unnecessary; and if the eye could not see at all, the instruments would be useless. It is really the eye that sees, through microscope and telescope, and the testimony of the instruments cannot be valid unless the testimony of the eye

is valid. Indeed, the instruments could have no testimony to offer if it were not for the eye. The same principle holds good with reference to any of the other senses.

Science would like, if it were possible, to eliminate the personal equation. To this end, it uses the method of repetition and comparison. It is never satisfied with one observation or with one experiment, with one seeing or one hearing. It accumulates many observations and compares them with each other, seeking by this means to eliminate individual errors and to arrive at the accurate impersonal fact. This method is extremely useful, and it doubtless often makes possible a very close approximation to the actual truth; but it is not by any means infallible. The individual errors never can be entirely eliminated. All that can be justly claimed is that errors tend to balance one another and that they are thus made practically negligible. In a word, we can by such methods reach a statistical average which is far more reliable than any single observation taken by itself. We do not, however, reach the absolute truth as to any observed facts.

Our knowledge must always largely depend upon the accuracy of the individual observations, upon their comparative freedom from error or variation. We could hardly expect to approach very close to the truth by comparing a large number of individual observations all of which were decidedly erroneous or in serious disagreement with each other. Our results can be trustworthy and useful only when we can believe that the

individual observations have a high degree of accuracy, that they are in substantial agreement with each other, and that the errors to be eliminated are comparatively slight. In other words, the basis of our confidence must be the reliability of the senses themselves.

Still more certain is it that our confidence in either scientific or practical knowledge must depend upon the validity of the individual observations as well as upon their accuracy. If they are not valid, then we have no basis for knowledge at all. Unless the human senses are capable of telling us the essential truth about the observable facts of the natural world and of doing so within the reasonable limits of error, we have no means of knowing anything about material things. The practical man has no doubts about the matter; he is sure that his senses are real and that they speak of reality; he finds them justified by all the tests of living. Science also finds them justified by its own stricter tests. By the very fact that it uses the senses as original sources of information and finds it worth while to make a painstaking comparison and correction of their testimony—balancing individual against individual and one sense against another—science testifies to its confidence in their essential validity. Science emphatically believes in the senses; it emphatically believes in the otherness and in man's power to know something about it through the senses. Otherwise its occupation would be gone.

The investigations of science into the facts of the physical world are necessarily based upon the direct or indirect testimony of the senses; but they do not by

any means stop there. As we have just been noting, science tries to make our sensuous knowledge more accurate and tries to extend the reach of the senses by cunningly devised instruments; but it also tries to devise methods of observation and experiment whereby it may compass facts which the senses may never hope to discern, however far they may be quickened and intensified and extended beyond their normal scope. In this further task, it has displayed marvelous ingenuity. It is able to discover a new chemical element in the incandescent sun or in a distant star, to detect invisible rays of light or inaudible vibrations of sound waves, to measure the vital energy which speeds imperceptible along the nerves, to accomplish many more similar feats of scientific magic.

It is of course true that the attainment of this remoter knowledge would be impossible if it were not for the more elementary knowledge acquired through the senses. One would not be likely, for instance, to detect invisible rays of light unless he had already acquired experience of visible rays. The senses, therefore, do give us the original knowledge of sensuous facts which is fundamental and preliminary to all further knowledge of physical things. The point is, however, that this further knowledge does not come to us directly through the senses or through the mere magnifying and extending of the powers of sense. It is gained rather through indirect observation and experiment. Certain things which come within the range of sense suggest or imply other things which the senses are unable to

apprehend and which therefore we could never know except in this indirect way. It is gained by legitimate inference from our previous experience of sensuous phenomena and from our previous knowledge of the laws of nature. From certain effects, for instance, we infer certain causes; from certain phenomena we infer other phenomena. By such indirect methods as these, science has already carried its explorations far beyond the scope of any organs or of any instruments. Where the senses have had to leave off, mind has pushed on into the unknown.

This extension of the mind's knowledge of the external world beyond any possible perception of the senses is nowhere better exemplified than in the researches of modern science into the constitution of matter. These new discoveries vastly extend man's knowledge of external reality, and they also vastly modify his conception of the nature of that reality. We have been accustomed to hear the molecule and the atom spoken of as particles of matter. We cannot any longer apply that term, without hesitation, to the constituent parts that make up the atom. The physicist is in doubt as to whether he may still speak of them as material in the sense that is commonly given to that word. They seem to be best conceived and described as infinitesimal centers of electrical energy, centers from which the energy radiates as by some power inherent in itself. They are hardly more material than are mathematical points. All the phenomena of nature, even including light, seem to be dependent upon this electrical struc-

ture of the atom and to be caused by this unceasing play of electrical energy. There is nothing of all this to be seen or heard or otherwise sensed, and yet tremendous energy is locked up within every atom and is constantly at work. Strange as it may seem, science even essays to weigh these immaterial electrical points. It has already learned much about them, and investigation still presses forward.

Into such a conception of matter and the external world the mind may enter without any feeling of violent estrangement. The ideas presented are of course novel and very different from those suggested by naïve experience or by any previous scientific knowledge. They seem, indeed, to revolutionize all previous conceptions of matter as something solid and tangible. Yet they are not alien to the mind itself. When the mind becomes accustomed to them, they seem reasonable and credible. The new world which they reveal is still an intelligible world. It is still "fitted to the mind." Indeed, the interpretation of the secret of matter as energy rather than as mass offers something thoroughly congenial to the mind. It brings mind and matter closer together and makes them seem more nearly akin. It suggests a possible principle of world unity. The mind can understand energy, for it has direct experience of a kind of energy in itself. Its difficulty has been to understand mass when it did not in itself have any mass.

The new world, even more obviously and more minutely than the old, is a mathematical world. This

means that it is a logical world. There is also here a further revelation of order and system and arrangement and adaptation and development. More than ever before, we have the conception of a principle fundamental to the physical universe, adequate to account for all physical phenomena. There is an impression of present mystery and of still more mysterious problems yet to be grappled with; but there is also an impression of enlightenment, of penetration, of solution. The plummet line of science may not yet have found the bottom, but at least it has been dropped into deeper soundings. At last science seems to have found a key to some of the great riddles of the world. Therefore the mind does not meet the new conceptions with any feeling of repugnance or of bewilderment. It rather finds them in harmony with its own nature and with its own instinct for deeper and clearer understanding.

Even though this new conception of the nature of the external world may be acceptable and satisfactory to the mind, the question naturally arises whether it does not after all tend to contradict and discredit the testimony of the senses. The view which it presents as to the constitution of matter is so utterly different from any that arises in our ordinary experience that the mind is disposed to think that it cannot accept one without rejecting the other. The senses present to our notice a particular object as having a certain feel, taste, odor, sound, form, color. They speak of size and weight and density and mass and a score more of definite and solid qualities. Science presents the same object to us as a

group of atoms each made up of an ordered system of rapidly moving points of electrical energy.

Which view is right? Can the two views possibly be reconciled? Must we not conclude that science has shown the senses to be untrustworthy? The simple and sufficient answer to such queries is that it is not the function of the senses to instruct us as to the ultimate constitution of matter. They are not adapted for any such purpose. They do not seek any such end. Their business is to give us such knowledge of the external world as may be necessary or profitable for our daily living and thinking. By all the tests of life, they serve that purpose well.

Must we conclude, then, that our life and thought are based upon a mistaken—though perhaps practically useful—view of the world? Not necessarily so. The senses report to us certain appearances of the external world as they present themselves to sensuous perception. Science really does nothing essentially different from that. It reports to us certain appearances of the external world as they present themselves to scientific investigation. These appearances, whether sensuous or scientific, are a part of reality. With due allowance for the margin of error, both kinds of appearance are valid, both are true.

It may be granted that the probability of error is less in the case of science, because it is more painstaking and more thorough; but this does not justify us in thinking that the testimony of the senses is necessarily discredited by any scientific view. In both ways, we

can attain to truth, but to truth relative and not absolute. This reminds us that the law of relativity plays its part here as well as elsewhere. If science accepts the doctrine of relativity as based on scientific law and fact, it can hardly deny the broader application of the same principle. We may venture to believe, then, that the appearance of the world presented by the senses is a true appearance as the world is experienced from the level of the senses, just as the appearance of the world presented by science is a true appearance as the world is experienced from the level of science.

There are other legitimate points of view as well, and these also have their own validity. There is, for instance, the point of view of philosophy. Philosophy seeks truth by the aid of the pure reason. It does not ignore the results of sensation or of scientific investigation, but it wishes to examine these and other things in the clear light of intelligence and then to follow the track indicated by logic. It goes to the very heart of things and inquires into the nature of being and of knowledge. It seeks to find out the difference between appearance and reality. It is interested in the relation between spirit and matter. In the interpretation of this relation, philosophical thought inclines toward monism, the doctrine that spirit and matter are one. Then the question arises, Which one? So we have materialism which holds that the one is matter, idealism which holds that the one is spirit, and a sort of neutral monism which holds that the one is neither matter nor spirit but some unknown substance behind them both—such, for

instance, as the ether. There are not wanting vigorous and able defenders of the more naïve and obvious doctrine of dualism. When the philosopher comes to speak of otherness, his view will of course be very largely determined by his underlying philosophical doctrine. Yet there would undoubtedly be a practically unanimous agreement that there is otherness of some kind, even though the otherness should ultimately prove to be of the same substance as the self.

Aside from abstract theory, all men—naïve individuals or scientists or philosophers—are to all intents and purposes dualists and speak the language of dualism. These various doctrines are not altogether irreconcilable. Each views the world from a special point of view, and each perceives relative truth though none perceives absolute truth. From what may be called the practical point of view—the point of view which is common to naïve experience and to science and to dualistic philosophy—the world appears to be a dualism. Whatever deeper reality may be behind it, this appearance is at least relatively and provisionally true. The validity of philosophy and of its various subordinate points of view rests upon the validity of human thought. If we may trust sensation and may trust scientific method, surely we may also trust the thinking mind. Indeed, we can hardly do otherwise; for in the last analysis, all knowledge depends upon mind and there is no valid experience of the world except in so far as the processes of human thought are worthy of credence in spite of all liability to error.

Still another point of view is what may be called the artistic or poetic. There may be some surprise at the suggestion that this also is one of the ways to the discovery of truth about the external world, to the finding of reality. Yet such is undoubtedly the fact. Poetry and art do of course deliberately build up fictions and dreams, and these should be recognized simply for what they are. Yet even the fiction may be a symbol of truth; and beyond this, truth is often a definite object and purpose. It is doubtless the fact that the primary impulse of poetry and art is not so much to discover truth as to make truth clear and impressive and beautiful; but in that process, it not seldom happens that truth is discovered and revealed. The great human power which makes this possible is the imagination. This power often feels the impulse to play; but it also feels the impulse to work. In its more serious moods, it is capable of making serious exploration in the field of truth.

The imagination often yields immense service to practical life, to science, and to philosophy. If we do not see this, it is because we have not considered the matter with sufficient care. Imagination has the power of construction and of association, but it has also the power of intuition and of insight. It can build new worlds of its own, but it can also send a penetrative glance below the surface of appearance toward the deeps of reality. It is the power which makes man a creator, but it is likewise the power which makes man a seer. We cannot seriously deny that it is one of the great functions

of the human soul or seriously doubt that it has a right to be heard in the forum of truth. When it speaks in earnest, it speaks not what it has felt or what it has investigated or what it has reasoned, but what it has seen. It speaks with conviction and assurance.

What is it, then, that the imagination sees? Many things, but chiefly this—that nature holds in its treasury spiritual values as well as material values. Nature can produce ideas and emotions and appreciations as well as sensations. If it be urged that nature cannot do this without the intervention of mind, the answer readily suggests itself that mind may have put such things into nature to be found there by other mind, that nature is a sort of language which mind utters and which mind interprets. In that case, spiritual values are in nature in the same sense that they are in words. At any rate, we know that imagination does find in nature significant analogies between the material and the spiritual. It finds there beauty, “the only spiritual quality of matter.” It finds subtle combinations of sounds or colors or words which have power to arouse the intellect, and by which, as Sir Philip Sidney said, “the heart is stirred as with the sound of a trumpet.” To the unimaginative mind, these things may seem meaningless or of little worth; but to kindred imagination, they bear the unmistakable impress of value and of truth.

The soul, then, in one way or another, finds in the world an otherness which is a significant and necessary complement of its own inner life. It finds something which it can feel through the senses and know through

the mind and appreciate through the imagination. It cannot always clearly distinguish between what it receives from nature and what it gives. There is in nature "both what we half create and half perceive." Yet, with all this give and take, there is a sure confidence that it is not all an echo of our own voice. We do touch reality through all appearances; we do find truth in spite of all limitation and mistake; we do discover in nature "recognized intelligence." From one point of view or another, we catch glimpses which may possibly be imperfect or mistaken. Through one avenue or another there flow in to us partial fragments of knowledge. By one power or another, we strive as best we may to seize and hold and understand. As a result of all our experience, there arises in us the firm conviction that we are not altogether as shadows in a world of shadows, that we are not doomed to walk in utter ignorance or in complete illusion, that there is an otherness which is knowable and that we ourselves have the power to know. Whatever else the world was made for, it was made for our acquaintance and our comprehension.

CHAPTER VII

OTHER GHOSTS

So far as the individual soul can know from its own immediate inner experience or from any direct evidence furnished by the senses, it is alone in the world. There is a universe of things around it, but not necessarily a universe of souls. We might imagine the soul, in its loneliness, as yearning for companionship and communion and as building up an ideal world peopled with its supposed fellow spirits. We might even imagine it as coming to exercise a greater or less degree of faith in its own creations, as coming to believe that there was truly a correspondence between its ideal world and some real world out of sight. Something very like this man has actually done, in the creation of his works of art, of his legends, of his mythologies, and even of his religions. He has created ideal and spiritual worlds in order to satisfy the instinctive needs of his soul. More than that, he has actually believed in them. How far these ideal creations reflect or represent reality, he has not been able to know. The very existence of such instincts seems to imply that they correspond with some reality. If the lonely soul has dreamed of other souls and of the possibility of soul companionship, it has not been left to find comfort only in its dream. In this

case, the dream has been realized in actual experience. The hunger of the soul has been satisfied, its hope has been fulfilled, its faith has been justified by the fact.

As the soul learns to know its own body, it first becomes acquainted there with material phenomena. It could not long remain at this stage without inquiring whether there were any such phenomena beyond the body. As it comes to know more and more of the otherness, it not only learns that there are such external physical phenomena, but it learns that the world is full of them. The soul, therefore, arrives easily enough at the conviction that it is dwelling in a material body which is in essential correspondence with a material world. As it considers further, it observes that the matter which is the body is in one respect radically different from other material things. It has the quality and the power called life. The soul naturally desires to know whether this unique quality belongs to the body alone or whether it is also to be found in any objects external to the body. It has wide kinship with matter. How far has it any living kindred?

This inquiry after life can be made only in indirect fashion. Life is not to be discerned directly but only through its physical manifestations. The soul knows, however, through its familiar acquaintance with the body, what these manifestations of life are. It watches for them and it finds them. They exist in abundant measure and their indications are unmistakable. The soul sees many objects that are quite evidently capable of sensation, of self-motion, of self-propagation, and

of all the other well-known characteristics of life. They appear in a multitudinous variety of forms and they represent many grades of vitality and efficiency and complexity, but they all manifest a power of self-determined activity which puts them in a class by themselves. They are alike, too, in the fact of organism, the union in one individual whole of various interdependent and coöperating parts and functions.

By that power of confident inference which is in the mind, it concludes, from these characteristic manifestations, that there are indeed other living objects, that there are, in a word, other bodies more or less different from its own in outward form but like its own in the fact of being alive. So the soul arrives at the conviction that it is dwelling in a living body which is in vital correspondence with a considerable part of the external world which also has the faculty and the function of life. Through its direct experience of its own life, it is able to understand and to interpret other life. It comes presently to see that life belongs to a great many objects but by no means to all. It distinguishes between the two and divides the world into the inanimate and the animate. It feels the immense significance of the distinction. It grasps the conception of a multitude of living creatures acting in a world of dead matter.

Yet the soul would still be lonely unless there were something more. It recognizes that most of these living creatures are in some marked way different from itself, are not really its fit mates and companions. It observes

among them various orders and degrees. Some lead a merely vegetable existence, rooted and fixed in their place. Others manifest a very low order of animal life. Through various ranks they ascend in freedom and beauty and activity and power and capability. Most of them shun the companionship of man and evidently belong to alien tribes. A rare few seem disposed to associate with man by their own choice. Yet the animal cannot rise to full companionship with the man, and the man cannot find the high satisfaction of comradeship and communion on his own level. He can find at best nothing more than a dumb loyalty and devotion.

What man instinctively yearns for is a genuine companion and friend with whom there may be mutual sympathy and appreciation. In order to find that, he must find living creatures whose powers and capacities are on his own level of life. What the soul really seeks is something fully akin to itself. It has found that its physical body has kinship with the physical world. It has found that the life within the body has kinship with life in many other bodies. It has found that its animal being has kinship with other animal being. But it seeks not only kindred flesh and kindred life and kindred activity but also kindred emotion and imagination and intelligence, kindred sympathies and ideals and purposes. The soul has recognized that it possesses not only a living body but a thinking mind, and it wishes to know if there are in the world other living creatures possessed of this same spiritual capacity.

Mind, like life, cannot be discovered directly; it can

be discerned only through its outward manifestations in the form of matter and of life. The soul, however, from its inner experience, is already familiar with these and is prepared to appreciate their significance and to interpret their meaning. As it enlarges its acquaintance with the world, it finds plenty of evidence to indicate that it has indeed spiritual kindred. It observes that there are living bodies like its own and different from those of any other animal. They walk erect on two feet, they have hands, they are capable of articulate speech, they have relatively larger and finer brains. There are differences so many and of such notable character as to mark these creatures off from all others and constitute them a special and distinct type. The others are animals; these are men. Their life activities set them still further apart. There is varied and definite evidence of more plan and purpose, of more foresight and adaptability, of less automatism and more self-determination, of less instinct and more intelligence, of less imitation and more individuality.

Clearly here is a peculiar type and quite as evidently a higher type. It presents the sort of organism with which the soul is already familiar in its own body. It is distinct and superior by virtue of its mental characteristics. The animal may often match and even overmatch man in sheer physical vitality and activity; but man has really more life even though he may have less purely physical life. The soul takes note of all these things and of many more, and it draws its own inevitable inferences. Here is mind. There are in the world living

creatures which have the same intellectual and spiritual capabilities which it finds within itself. These are real comrades and companions with whom there may be interchange of thought and experience. There are other souls. It is not alone.

Such conclusions on the part of the soul are amply and richly confirmed by its further experience. Perhaps nowhere is its assurance of reality any stronger. It may be troubled with doubt as to whether it can understand matter, because matter is a form of being radically different from itself; but it feels a deep instinctive conviction that it cannot be mistaken in its recognition of spirit, that it knows intelligence and the outward signs of intelligence. This self-confidence and self-assurance of the soul doubtless arises from the fact that it is here dealing with something which is of its own very nature and substance. It might not, without actual experience, feel able to reach any positive conviction that other souls actually existed; but it would feel instinctively sure that it could recognize them whenever it might see them. When experience has once made it acquainted with the manifold evidence of intelligence and spirit, the soul knows whence they must have sprung and is almost as sure of other souls as it is of itself.

To have the certain knowledge that other souls exist in the world is a matter of supreme importance to the individual soul. Other extensions of its range of knowledge are of interest from a practical or from an intellectual point of view; but this knowledge, that there are others of its kind and that it is not solitary in the world,

is vital to its deepest needs. Without that knowledge, the soul would be like some lone survivor in a depopulated world, rich in many possessions but having no other with whom to enjoy them or to share them. It would not even have the lingering memory of something which once had been. Yet the bare knowledge of the existence of other souls is not enough. If other souls exist and if there is yet no possibility of communication with them, the case of the individual soul is hardly improved.

Such a situation would make the world almost as empty and as meaningless as if there were no souls. Happily, man is not faced by any such gloomy situation. There is nothing in our wider knowledge and experience more certain than the fact that human souls can and do communicate with each other. Thus we arrive at the conception of a community of human souls. What wonderful possibilities and consequences have been revealed as that conception has more and more realized itself historically in actual human life. One of the most obvious consequences appears in the gradual but inevitable growth of what we call human society. Souls discover themselves to be gregarious. When they become aware of each other and find that they can communicate, they begin instinctively to gather themselves together into various social groups. They form families and tribes and communities and nations and a thousand other varieties of social organizations, and will perhaps come at last to a complete social and political union in "the federation of the world." These, how-

ever, are only the outward artificial forms through which society expresses the innate tendencies of men. Society includes them all and is itself something more.

Fundamentally considered, society is an instinctive and necessary union arising out of mutual attraction and affinity, resting upon human craving and need. Human gregariousness rises above mere animal instinct to the level of voluntary choice and individual selection. It is based upon the fact that human individuals consciously find comfort and satisfaction and enlargement and fulfillment in association with their fellows. Not only so, but man comes more and more to realize through such association his own aptitudes and possibilities as a social being. He finds large opportunity not only to receive but to give, and he realizes that both are in accord with his own deepest nature. This leads us to note the strong natural tendency of men as social beings toward coöperation in effort. It is one of the most important aspects of the social relation and one of the most significant expressions of the human disposition to fellowship. Animals coöperate instinctively, simply obeying the natural impulses of their kind. Their ends are, so to say, dictated by nature and not devised by themselves. Men, on the contrary, coöperate by voluntary assent and deliberate intention. They choose their own ends, they devise their own methods, they unite a great variety of individual efforts in a general organized effort.

It is characteristic of men that they coöperate not only to carry on the instinctive activity of their social

group but to change and improve that group and to contribute to the welfare and improvement of other groups and of humanity as a whole. Men are capable not only of realizing what they are but of forming ideals of what they would like to be. They are capable of forming new plans which shall change their own past actions and habits and which shall alter the whole framework of their society and adjust it to new aims and purposes. If these ideals and plans arose only in individual minds and had behind them only the force of individual powers, they would remain for the most part mere dreams and wishes. They would be equally futile if the individual could offer only the coöperation of a blind instinct. Happily, the individual mind can influence other minds and can persuade them to accept its own views; and the other minds can yield a voluntary assent and give an intelligent coöperation. Men can accept each others' ideals, they can agree in their purposes, they can unite on plans for carrying them forward. They can coöperate with each other not only in thought but in the appropriate action which shall translate thought into achievement.

Curiously enough, the idea of a community of human souls only tends to accentuate the idea of individuality. The sense of individuality probably grows gradually in the soul in proportion as it becomes acquainted with the outer world. From its acquaintance with the world of material things, the soul learns that it is a separate entity or self, different from the external objects with which it comes in contact. The conception of indi-

viduality is suggested, but it hardly becomes a very definite and distinct idea. From its acquaintance with the world of living creatures, the soul learns that it is one of a particular class, in many respects like the others but also in many respects different, and in any case, separate and apart. The idea of individuality grows in clearness, but it does not yet seem to receive any special emphasis or to acquire any decided importance.

When the soul comes to know of the existence of other human souls and becomes actually acquainted with them, the situation is altered. Such differences as those which separate mind from matter or man from animal here grow small or fade away, and the soul recognizes that it is in all essential respects like its human fellows. Yet out of this very likeness grows sharper and clearer the fact of individual separation. There is likeness but no identity. The soul distinctly realizes its individuality. The more it becomes acquainted with other souls and with its own relation to them, the more clearly does it recognize that each soul is its own individual self. Differences of quality and ability and activity begin to appear, and they are not the typical differences that define a class but the specific differences that belong to particular individuals.

It might be supposed that intimate association would tend to reduce these individual differences and to bring all individuals to a uniform level. This is probably true in the case of animals. In the lower human grades

it is probably true. Men are inclined to conformity. Under strong general pressure, the individual often seems to be submerged. In spite of all, however, human association probably tends to increase not only the idea of individuality but also the very fact of individuality. Civilization is at its best where individuality is strongest. The best specimens of the race are those in whom individuality is most highly developed. There is good ground for the belief that the evolution of humanity is bound up with the evolution of the individual.

This has already carried us a step further than individuality in the strict sense of the term. Animals have individuality. Man has individuality and something more—personality. Individuality implies separateness and it implies unity. Personality might be described as the sum of all the characteristic qualities that go to make up a sharply defined human individual. Individuality emphasizes the one as distinguished from all others. Personality emphasizes rather the peculiar and distinctive character of the one. In accordance with the special traits of the individual person in any particular case, we speak of the personality as strong or weak, subtle or simple, profound or shallow, refined or coarse, or as characterized in scores of other ways. Personality is determined by the various possible combinations of human qualities and is limited only by the range of these combinations.

As the soul becomes acquainted with other souls and observes their relations to itself and to each other, it is not content to stop with the simple knowledge that they

exist and that each of them is a single and separate individual being. It is eager to know much more than this. It is especially interested to know what various kinds of human beings may possibly exist and to know what particular sort of being each one of them actually is. Here is the point at which it begins to realize the great fact of personality and to understand what a rich and varied field of human character is opened up for its experience. In all its exploration of the world, it has come across no fact more wonderful than this. It has found none that is more significant or more fascinating. The conception of the community of human souls gains an immensely greater meaning when we think of human society as made up not merely of so many individual units, like the society of an ant-heap or a beehive, but of unique persons, each containing within itself the peculiar qualities and the peculiar union of qualities which give it a distinctive character.

Among all the innumerable persons in the world, no two are exactly alike, although they are all composed of the same psychic stuff. In this spiritual chemistry, as in the chemistry of matter, numberless compounds are made out of comparatively few elements and even these few elements derive from a common source. Psychology is perhaps chiefly interested in the similarities between human beings. It does not of course neglect the variations and the rare combinations, but its main business is with the average and the norm. Such emphasis upon the rule rather than upon the exception is the characteristic and perfectly natural method of

science. On the other hand, however, the soul is likely to find its chief interest in the differences between persons. These distinguish one personality from another. They enlarge our knowledge of human possibilities. They enrich our conception of personality by showing us how wide is its range and how marvelous and strange are some of its combinations. Nature produces general types of personality, even as she produces general types of animal organisms; but she achieves her masterpieces in both kinds, not when she produces types and classes but when she produces individuals of rare and surpassing excellence. Her work is especially happy when these matchless individuals are human personalities.

The soul is not content merely to be acquainted with other souls or merely to have knowledge of their peculiar qualities and characteristics. Its interest is not simply a speculative interest but a vital interest. It feels an instinctive yearning for a real communion of souls, for intimate personal relations. This also proves to be possible, and the realization of this possibility opens up a whole world of new and rich experience. There may of course be repulsion as well as attraction, hostility as well as affinity. Men desire to find companions and comrades and friends; they sometimes find instead antagonists or enemies. Whatever the particular relation may prove to be, the intimate contact of souls with souls is a thrilling and vital one. It is such personal relations that largely make up the substance of human life. They give to life a larger measure of real

significance. Without them, life would lose almost as much in meaning as it would in interest.

Our common daily experience shows us that such relations may take a great variety of forms. The relation may, for instance, be a social one. Men may labor together or play together or sing together or drink together or compete with each other or fight with each other. In a thousand ways every day they engage in some sort of social interchange. They are acting in obedience to social instincts or purposes which are a part of their very nature. They find in such intercourse satisfaction of their personal need and wide enlargement of their social life. The relation may be an intellectual one. Mind may meet with mind. Men may communicate their thoughts to one another, may argue or explain, may agree or disagree. Knowledge is enlarged and thought is quickened. There is opportunity for intellectual pleasure and profit in the interchange of ideas.

Perhaps the most significant of all human relations is the emotional one. Men are impelled to love each other or to hate each other, to admire each other or to despise each other, to sympathize with each other or to fear each other. By all sorts of emotions, they are brought into mutual contact. Hatred is an emotion which tends to dissolve society because it repels and destroys. On the other hand, love is the great bond of union between men, the basis of the deepest and fullest and most intimate communion. Moreover, love is knowledge. It admits us into the privacy of other souls. It takes very

many forms—love of parent and child, of brother and sister, of husband and wife, of lover and mistress, of friend and friend—but it bears ever the same characteristic marks of attraction and attachment and tenderness and devotion and self-surrender.

These acquaintanceships and relationships between soul and soul are an enlargement and enrichment of individual experience such as could not be obtained in any other way. They add to our own limited experience the experience of other beings fundamentally like ourselves but in many important particulars so very unlike. Through the likeness, we are able to understand and appreciate; through our perception of the unlikeness, we learn a thousand things which we could not otherwise know. We are enabled to project ourselves beyond our own boundaries and to live lives larger than our own. This extraneous human experience into which we thus have the power to enter is for us an imagined experience and in that sense ideal.

It is not, of course, in itself anything imaginary or nonexistent. It is simply the experience of other souls rather than our own experience. It has therefore its own reality; to others it is something actual and personal. The point is that we can never experience it directly; we can experience only the ideal conception of it which we frame in imagination. Nevertheless, we accept it as reality, just as we accept a thousand things which we can never know by any direct experience. It becomes for us veritably a part of human life, and we act upon it as confidently and surely as if we knew

it at first hand. We become aware not only of new varieties of human experience but also of new quality and texture of soul. We are enlarged and developed by the contact. The warmth and color and sensitiveness and vividness of other souls tend to infuse themselves into our souls or at least to awaken and to quicken whatever germs of kindred life may there be latent.

The soul living in solitude, shut off from its fellows, would have at best but a meager and stunted growth. Constant personal and social communion with other souls and with the community of souls provides the atmosphere and the warmth and the light which are the conditions of favorable development and which help the soul to realize its own inherent possibilities. The extent of the influences which the soul may receive through its association with other souls is practically boundless. Souls are innumerable; each one of us is limited only by his own opportunity and by his own capability for personal contact. It is a notable fact that the contact need not be strictly personal in the sense of being immediate and direct. That opens another wide door. Souls that can never meet, even souls separated from one another by long stretches of space or time, may exert or receive a spiritual influence through some embodiment or record of experience—through a letter or a novel or a drama or a poem or a picture or a statue or a cathedral or a symphony. This is one of the great and potent uses of music and literature and art.

Contact of souls is not only an extension of experience, it is also an extension of knowledge. Souls may

profit by what other souls have learned. Souls may communicate not only what they are but what they know. The first result of this fact is that the soul may be corrected or confirmed as to what it already thinks it knows. When it finds any of its convictions denied or controverted by others, it is likely to consider the case again, to look for new information and evidence, perhaps to revise its former opinions. Wherever it finds that its own views are generally accepted and approved by other men, especially by what it considers good authority, it feels that its own knowledge is more firmly established. It may find its opinions challenged and yet still continue to cling to them. In such case, it must rely upon itself. It has learned in the process, however, that other souls teach it how to know and how to think. If it has not at least learned that much, its chances of knowledge are small.

It is almost impossible for us to conceive how little we could know if we were left entirely to our own resources. Our own psychic experience and the sensations of our own bodies we can of course know with a knowledge which is impossible to any other. Beyond that direct experience, we are largely dependent upon knowledge received from others. For adequate knowledge of the structure of our own bodies, we must go to the physiologist. For knowledge of the external world, we must go to the physicist and the chemist. For knowledge of the earth's structure, we must go to the geologist. For knowledge of the structure of the universe, we must go to the astronomer. For knowledge of the

human past, we must go to the historian. For knowledge of the world of ideas, we must go to the philosopher. And so on endlessly throughout the whole realm of human knowledge. The accumulation of knowledge which can be made by the unaided efforts of any one student or thinker in the course of a lifetime must needs be comparatively small. Even such small addition to the common stock could not have been made if it had not been for the researches of those who went before him. In strictly individual knowledge, humanity is poor. In the gathered knowledge of many minds, accumulated through the ages and corrected and improved from generation to generation, it is immensely rich.

Civilization is very largely dependent upon man's accumulated knowledge, and advancing civilization is largely a matter of man's advancing knowledge. The vast treasure house is open to all, and each may take according to his industry and his capacity and his openness of mind. This acquiring of individual knowledge is partly a matter of direct personal contact and association. We learn from our fellows and our friends and our teachers in the daily and hourly contacts of the world's business and pleasure. We absorb knowledge consciously and unconsciously. Yet this is not our only resource. The indirect meeting of minds opens up still wider possibilities for those who are able to avail themselves of the boundless opportunity. We may gather knowledge from books and other records where it is preserved and ordered and displayed. How much of all this knowledge can be absorbed and what uses can

be made of it must of course always depend on the native capacity and acquired training of the individual. A thousand insects can roam the wide fields from flower to flower; bees can gather honey and can transmute it into the energy of life.

The contact of souls, as we have seen, is partly a personal one, a matter of personal knowledge, of personal acquaintance and of personal relations. The individual soul has reached across the gulf, has assured itself of the existence of other persons like itself, has established communication with them, has associated with them in all the manifold relations which make up the personal life. It has found this association to be a satisfaction of its deepest instincts and desires. It has found it to be a matter of absorbing interest, the most fascinating of all occupations, the most inspiring and most fruitful of all studies. More than all, it has found it to be a matter of supreme importance, something necessary to its own happiness and its own welfare. Without it, the personal life would not only be poor and intolerably lonely, it would be practically impossible. One who was hindered from communication with his fellows by being deaf and dumb and blind would be in terrible plight, but at worst, his isolation and disability would not be complete. How much more deplorable the situation would be if he could not in any manner or by any way communicate with his fellows or they with him. How much human life has gained from the fact that its normal conditions involve personal intercourse and personal association.

The contact of human souls is not only a contact of individuals with individuals. It is also a contact of individuals with groups or of groups with groups. This brings in a factor of immense practical importance. Human association is thereby expanded and multiplied and raised as it were to a higher power. Not only so, but it is often seriously changed in character. It is a matter of common experience that there is a great difference between dealing with a person and dealing with a group, and the larger the group, the greater the difference becomes. A familiar example is that of the speaker who can talk calmly enough to a single friend or stranger, but who feels his face flush and his voice tremble when he comes to speak before an audience. There is another side to the matter. Contact with the many does not always depress or overawe. Sometimes it exalts. The audience may inspire the speaker and lift him to heights of eloquence. In such contact there would seem to be both loss and gain. Perhaps the greatest danger is that something of individuality may be lost, that personal values may be submerged in the crowd. But if personality can retain its balance and preserve its integrity, then the wider social influences and relations are something added to its power. Society is based upon these social contacts. We must not be dominated or suppressed by them but must ride upon them as small ships ride upon great waves.

Men are living not only in a world of men but in a world of ideas. Through their association with each other, men work together to build up the ideal world

of mind. Individual men create or discover ideas. Often the labors of many men unite in enlarging or completing or modifying these ideas, perhaps in developing whole systems of thought. Especially in the field of science is the effort a coöperative one, not only as regards the discovery of facts, but also as regards the discovery of laws and theories and principles. Society accepts these ideas and gives them currency and preserves them to the future. Gradually the great body of thought grows in volume and in clearness and in solidity. It becomes in truth an intellectual world which the mind of man may inhabit.

This world of mind is varied and rich and full. Many volumes are needed to tell the story of science or literature or philosophy. Great libraries are filled with the books which contain the recorded thoughts of individual thinkers. Out of the many emerge the comparatively few of supreme excellence which are accepted as the world's great masterpieces. There are some great names, great works, great ideas, which are familiar to every one who has been made free of the world of thought, who is even an embryo citizen of the great republic of mind. All this intellectual achievement depends upon human association. Great thinkers may lead lonely lives; but their work has a thousand associations with the work of other men, their predecessors or their fellow-workers. They are dependent upon the great body of their fellows for recognition and acceptance and appreciation. The world of ideas is built by an association of men.

This congregation of ghosts is the supreme reality of our world. It makes all other reality realizable. It makes all other reality worth while. Millions of flaming suns, with their retinues of planets and satellites—what significance have these without the conscious soul or some similar intelligence to know them? What uses have they unless there are many souls to use them? Now they are warmth and light and beauty and power and knowledge. Now soul can communicate with soul concerning the thoughts and emotions which these objects of nature arouse. The soul is capable of thinking about the physical universe and within due limits is capable of knowing it and understanding it. The soul itself is not so easily understood. An eminent psychologist is reported as saying that "the motions of the solar system since its beginning are less complicated than the play of a child for a day." No wonder the task of psychology is so difficult. Yet the soul is capable of thinking about these things also and within limits is capable of knowing them and understanding them. It already knows much and is persistently and hopefully striving to know more. Its most interesting and most fascinating task is to learn all that is possible about itself and about its relation to the world of things and about its relation to other souls and about the relation of other souls to the world and to each other.

In spite of the immensity and the complexity and the elusiveness of the subject, there is a sense in which the soul understands souls and the mutual relations of souls better than it understands anything else. The difficulty

of understanding souls is in truth principally a scientific difficulty, the difficulty of putting into scientific form and of translating into scientific terms a knowledge which is not of a scientific order but of an intuitive order. The effort to do this is eminently worth while, so far as it is possible; but the scientist must not suppose that only scientific knowledge is worthy of consideration. The facts may "elude experimental and quantitative methods," but they are known to human experience. As the soul lives its life and expands its acquaintance, it finds in material things an otherness which is different from itself; it also finds in other souls an otherness which is like itself. These two together make its world.

CHAPTER VIII

MESSENGERS AND MESSAGES

THE soul sits at its own center and sends its couriers back and forth on its errands of communication. It has its own telegraph lines on which the messages flow in and out. The central office of this system of communication is the brain. There the couriers are admitted and dispatched. There the messages are received and registered and decoded and interpreted, and there orders are given for messages of response. To a certain extent, this reception and response seems to be purely automatic. In very large part, however, it rises well above the automatic level and emerges into the light of consciousness. It is of course on the higher conscious level that communication becomes really significant. Here the brain is a confidential agent of the soul, a mediator between the soul and its environment. It is perhaps something even deeper and more intimate than that. Unless we are to think of soul as being one with brain, there must be some sort of private communication between them, a relation unshared with other things. The soul exerts upon the brain the influence of its thought and feeling and will and whole spiritual activity. It stores in the brain its impressions and its

memories. The brain reflects back to the soul its own images in solid form and clear outline, as stars are reflected in a deep pool. It gives up again the stored records for new perusal. In such intercourse, there is no need of any intermediary. Soul and brain speak to each other in private and in a language which is to be understood only by themselves.

Beyond this strictly private intercourse between mind and brain, the function of the brain is to act as an intermediate agent between the soul and the body, to transmit to the soul the impressions which the brain receives from without and to transmit from the soul the responses and decisions and orders which the soul wishes to send. How near the brain comes to being a perfect transmitter, no one can say. It is not at all unlikely that much is lost in transmission, that much is altered or modified, that much is clouded or dimmed. Undoubtedly all this depends in great measure on the individual brain. Brains are evidently capable of wide variations and of immense differences. However the case may be, the transmission is practically serviceable enough to answer all the ends and purposes of human life. The probability would seem to be that it is as nearly perfect as any other human function.

The relation of the brain to the soul is a mystery which science does not profess to solve and which the soul itself is not able to solve. It is a relation which only immediate experience can in any wise appreciate. If we were not ourselves a part of it, we could not even conceive it as a possibility, much less understand

its nature. On the other hand, the brain itself as a physical organ may be brought within the scope of scientific investigation. So likewise may the relation between the brain and the body. If the brain secretes thought, the subtle process may still elude all search, but the anatomy and physiology of the brain may in large measure be understood and may at least be studied by definite and concrete methods. The same is true of the physical organs which establish relation between the body and the brain. The task is an extremely difficult one, for the investigator is dealing with organs very delicate and subtle. Matter is here refined almost to the utmost rarity. Yet we are able to know much concerning the structure and functions of the brain and of its various parts and also concerning the way in which it is connected with the rest of the bodily organism.

As to the energy which keeps the brain in motion and impels it to the performance of its singular task, we are not so well instructed. In short, what the brain is in a purely physical sense, we at least partly know; how it does its work, we do not know at all. We may of course know something of what it does, and that is what concerns us here. It is the center toward which converge a myriad nerves. These are constantly acting upon the brain to produce a multitude of impressions. By some strange power of its own, the brain sorts these out, arranges and coördinates them, and passes them on to the soul for its perception and cognition. On the other hand, the brain is the center from which a myriad nerves diverge. Acting under the influence

and direction of the soul, it sends out along these nerves a multitude of impulses which are aimed to produce definite effects in definite directions and in definite ways. The brain has thus a threefold office or function: it is a receiver, an informer, and an executive.

The nervous system is only less wonderful than the brain. It is wonderful, in the first place, for its complexity. It has its two main systems of afferent and efferent nerves, the one carrying impulses toward the brain, the other carrying impulses away from the brain. Both of these systems divide into numberless ramifications, reaching out their tendrils to all parts of the body and thus bringing all the parts into connection with the brain whether for sensation or for action. Even more wonderful is the secret energy by which the impulses from the physical world without or from the brain within are speeded with the motion of light along the nerves. The nerves themselves can be laid bare, their texture can be examined, their contraction and expansion can be observed, but this living energy eludes all possibility of capture. To call it mere mechanism or mere chemistry is only another way of saying that we do not know what else it may be. We may call it electricity, but that would only substitute one mystery for another. We can only say that it is the energy of life, and that is still mystery.

Happily we are not here concerned with the structure or with the nature or with the principle of action of the nervous system except so far as these may help us to grasp the fact of it and to appreciate its function

as a means of communication. The nerves are the ready and capable messengers of the brain; perhaps, rather, they are like the wires of a telegraph system, carrying the messages in and out. The important point is that they do convey messages in the form of sensations or of impulses. When these are interpreted by the mind, they may become messages of wider import. Even in their original and elementary form, they are often very clear and definite. When the mind has compared them and has translated them into its own language, they become intelligible.

The first task of the nerves as messengers is to give the brain information concerning the body. Through the nerves, the brain learns that there is a body and comes to know much about its structure and its peculiar qualities. On the basis of this general knowledge, it is ever receiving information as to the state and the disposition and the momentary feelings of different parts of the body. It learns that some part is warm or cold, is being affected by some painful or pleasant sensation, is demanding the satisfaction of some need or desire, is impelled toward some display of its natural activity. It learns of hunger and thirst, of drowsiness or wakefulness, of dullness or alertness, of weariness or activity. It is made aware constantly of its outer members and sometimes of its internal organs. In the thousands of ways known to common experience, the quick and constant messages are being flashed in, not altogether ceasing even when we sleep.

Through these messages the brain is kept momentarily

advised as to what is going on in all parts of its domain. Some of the messages do not quite get through to the center, and so never come to the attention of consciousness; others are practically ignored as being of no particular interest; but when the message is both clear and important, the brain is ready to grasp, to understand, and to act. Before it acts, it has the power to compare, to coördinate, to choose and to decide. Then the messages begin to go out, and the nerves are the bearers. They go to the muscles and bid them contract or relax. This is often a complicated process which determines complicated action, but the brain is fully equal to the task. It has ability to supervise the whole procedure and to direct the activity of the muscles in such a way that all their movements are coördinated and controlled with respect to the foreseen end. This seems like an easy and simple matter, but it is very far from that. Even such comparatively simple acts as pushing or pulling or grasping or walking are in reality very complicated and require a considerable degree of coördination. How much more is this the case in talking or singing or playing upon a piano or a violin.

This same system of transmission, including the brain and the nervous system, also serves to establish and maintain communication with the material world which lies beyond the body. Between things and the nerves, the senses intervene. They are from one point of view messengers conveying their gathered information to the nerves in order that these may in turn transmit it to the brain. From another point of view, they are rather

like receiving stations where many items of information are brought in by other messengers. Whatever they receive is at once automatically transmitted to the nerves. The other messengers are any objects or energies of nature which are capable of making any sort of impression upon any of the senses. Thus the whole world is full of messengers ready to convey their characteristic messages whenever they may come into contact with the senses of animals or men. There is a potency in things to make such impressions; but still more significantly, there is a potency in living organs to receive and to transmit them. Still more significantly, it may be added, there is a potency in mind to understand them and to think about them.

Some material objects are too small or too far away to affect the senses; perhaps there are some that could not have an appreciable effect upon them in any case. Other objects, whether on account of their nature or on account of distance or some other reason, affect only a single sense. Most objects affect two or more of the senses, and some objects may affect all the senses. The messages are pouring in continually through all the avenues of sense and are thus supplying the mind with a vast and varied store of information concerning material things. Simultaneous impressions of the same object received through different senses mutually support and supplement each other. A further and higher degree of coördination is supplied by the brain, and the final coördination must be accomplished by the conscious activity of the thinking mind. Such coördination

is of course one of the most important elements of human knowledge.

We speak of the sense of touch as though it were single and specific; but it is in effect many different senses in one, or at least has many shades and gradations which may seem so different from each other as hardly to belong to the same class. How different, for instance, is the feeling of roughness from the feeling of coldness. Because of this range and diversity, touch is able to record a great variety of impressions and to convey a great variety of information concerning external objects. We undoubtedly receive from it a strong general impression of the reality of objects; but what is more to the present purpose is the evident fact that we also learn many things in detail as to their peculiar qualities and powers of action. They send us many messages which we are capable of receiving and understanding.

The senses of smell and of taste stand somewhat apart from the other senses and seem to have a close and natural affinity with each other. Sometimes the characteristic effects of the two senses are so intimately blended together that they are hardly to be distinguished from one another in the common impression made by both. Their range is very great and they are capable of very fine discriminations. They can therefore receive and transmit many interesting items of information. They have great practical uses whether for warning or stimulation or pleasure. They also contribute in no small degree to our knowledge of the nature of

things. Their direct service to the thinking mind is probably less important than that of any of the other senses; but they transmit messages concerning a wide range of sensuous impressions and thereby help to increase the store of information which is at the mind's disposal. Without them, the system of communication would be to that extent less complete.

The messengers which bring in their reports to the sense of hearing are waves produced by certain vibrations of matter. What we learn through the ear from natural objects is not so much that they are capable of producing vibrations or waves as that they are capable of producing sounds. We perceive in these sounds differences of intensity, of pitch, of quality and so on. The sense of hearing provides materials for a wide range and variety of human satisfactions. It is, for instance, one of the most useful and efficient of the practical servants of the body. It is constantly gathering information as to the capabilities of different kinds of objects for producing different kinds of sounds and learns to distinguish the objects by the sound. It is able to tell us when the clock strikes, when the bell rings, when the whistle blows, when the band plays, when the human voice speaks or sings. Such items of information are almost indispensable to the successful conduct of our daily life.

The great messenger to the sense of sight is the radiant energy which is called light. Light is presumably to be conceived as a vibration of the ether, inconceivably rapid in its motion. This vibration of an

intangible and imponderable substance acts upon the retina of the eye, and light becomes vision. Light falls upon an object and is reflected to the eye, and the object becomes visible. Thus the varied objects of nature, through the agency of light, are able to become messengers reporting of themselves and revealing such of their qualities as are capable of being seen. By day, the world is bathed in light and myriads of objects disclose themselves. By night, the stars shine across immeasurable distances and reveal themselves by their own light. It is amazing to consider how much the single eye can take within the compass of its vision and how many messages are being delivered to it at the same time. Sight rivals any of the other senses in clearness of definition when the object is close by, and it is vastly superior to all of them in its reach.

Something like this is the office of the several senses as messengers from the outer world to the mind of man. Touch is the basic sense; probably all living creatures have it in some degree. The other senses are later and more specialized developments. Taste and smell seem to have remained largely on the animal level. They are by no means incapable of higher service, but they are relatively more useful and significant to the animals than they are to men. They help to give man a sharper and clearer impression of the existence of quality in things. Hearing and sight may be fairly called the nobler senses. They seem specially adapted to man, and man has been able to lift them to a distinctly higher level. They have been found capable of

more intellectual uses and associations. They afford a much wider range of spiritual suggestion and analogy. Their practical service to animal and to human life is not less than that of the other senses—perhaps it is even greater—but their special distinction is that they have a higher affinity and that they are able in such large measure to serve the nobler uses of the soul.

If each of the senses were left to perform its own special task by itself, without any aid from any other sense, the results of its work would be greatly limited in scope and in value. It would not even be able to realize its own full possibilities. The senses, however, usually work together like a disciplined team. They corroborate or correct one another. They offer a sort of mutual suggestion by which each is enabled to work more efficiently in its own particular sphere. They supplement and complete one another. Of course the really significant fact of the matter is that the brain coördinates the senses and their results. At any rate, there is effective coöperation. Through this working of the senses, separated or united, comes all our direct knowledge of the external world. It comes as a totality. We can, of course, discriminate between the various sense impressions, but we do not often consciously stop to do so. We simply accept as a whole the knowledge which they offer us, without noting particularly from which sense the various items may come. This knowledge is summarized in the mind and is used freely without particular regard to its origin. It has ceased to be sensation and has become knowledge and thought.

The senses perform each momentary task, forget about it, and pass on to something else. The brain makes more or less permanent records of its experiences and stores them away in its archives for future reference. The mind brings forth out of this treasury things new and old and makes use of them according to its own purpose. The information brought together by the coöperative work of all the senses does in very truth constitute a vast and precious treasure of knowledge, made important by its accumulation and increased in value by its correlation. The mind is able to add to this direct knowledge provided by the senses a vast store of indirect knowledge gained by methods of its own. It accomplishes this result by various processes of inference, arguing from the known to the unknown. The contribution of the senses is supplemented and extended by the contribution of logical reasoning. For instance, none of the senses could ever inform us of the electron; but science has nevertheless discovered the existence of the electron by its own experimental and logical methods. The astronomer asserts, on the basis of mathematical calculations, the existence of a planet that has hitherto been unseen and unknown, and actual observation later proves that the assertion was justified by the fact. Man is not less sure of this indirect knowledge than of the knowledge furnished directly by the senses. Indeed, he often feels much more sure.

Between mind and body there is a sort of intercommunication. The body can communicate to the mind a great variety of information received from

within itself and from the outer world. The mind can also communicate with the body in the sense that it can directly and immediately exert influence upon the brain and through the brain can control the muscular system. There is here a certain kind and degree of mutual responsiveness, although there is not a mutual consciousness of the communications and the responses. Between the mind and external objects, the mode of communication is even more nearly one-sided. Nature can send communications and the mind can receive them. The mind is capable of sending communications, but nature cannot receive them. The mind can of course act on nature, but not directly; and so far as we know, there is no power in nature to apprehend the messages of mind, or even to give such appropriate response to them as the body gives.

The mind is not satisfied by this interchange and feels itself capable of something more. It yearns for a really intelligent intercourse, for communication and response that are of the same quality as its own. Through the senses, it comes to know of other human bodies. It draws the inference that these also contain souls. It proceeds to devise means by which souls may communicate with each other. So it comes to pass that the system of communication through the senses, as provided by nature, is supplemented by various artificial means invented by man. The senses must still be used as messengers; but they are trained as it were to a new sort of service and the messages which they convey are written in the language of the mind and not in the

hieroglyphics of nature and the senses. Man finds himself justified in his confident belief in other souls. His devices work. Intelligent messages are sent and intelligent messages are received. Moreover, they are really responsive; they show clearly that mind is answering to mind. With every such message, assurance grows that a genuine communication has been established. Man becomes just as confident of interchange with other minds as he is of interchange with any objects that he can touch or taste or smell or hear or see. Moreover, the new interchange is on a higher level. On both sides, it is conscious and intelligent.

The human animal is something more than a "featherless biped," he is "articulate-speaking man." Speech, more than anything else, is the characteristic mark which distinguishes him from the other animals. They can utter more or less articulate sounds and can thus to a limited extent communicate with each other; but they are not capable of speech in the full sense of the term, especially of that intelligent and systematic speech which is called language. For the most part, they are confined to inarticulate natural cries expressive of the simplest feelings. Man has vocal organs which can not only utter sounds but also articulate them into vocables and syllables and words. He has also organs which can hear these words and convey them to the brain and mind. Best of all, he has a mind to organize and to understand. On this basis, he has invented many languages by ingeniously contriving to make certain words represent certain ideas.

The general principle underlying these languages is simple enough, but it develops results which are astonishingly complex and far-reaching. Some of the great world languages are marvelously rich and comprehensive and effective as vehicles of thought. Through them men are able to communicate with each other over a great range of utterance and meaning and with a high degree of accuracy. One man speaks certain words, another man hears what is spoken, and the corresponding ideas are thus conveyed from mind to mind. It is a familiar process, but none the less a veritable triumph of the human intelligence. As man lives his historic life, certain languages die out and other languages arise. The reasons are many and vary with the particular case; but in general the changes correspond with man's changing needs and changing development. Language follows the guidance of thought and is shaped and modified by thought. There is a tendency for languages to split up into dialects as groups of men are isolated from each other, and these variations may become so great that new languages are formed. As the peoples of the world come into ever closer relations, this tendency is somewhat checked. There is now an opposite tendency for different languages to approach each other and finally blend into one. The ideal goal of such a process would be a universal human language.

Original language is spoken language. This, however, has not been found quite sufficient to meet man's requirements. It limits his communication to cases

where direct speech can be directly heard. Man desires to have speech with those who are not within the reach of the voice. He desires to have words from those who may be long dead or to leave words of his own to be understood by posterity. So he has recourse to the ingenious device of written language. This again is simple enough in principle but multitudinous and complex in detail. It consists in making certain visible signs represent ideas. Sometimes the visible signs represent the ideas directly, just as spoken words do; sometimes the signs represent directly the spoken words and thus indirectly the ideas. The first of these methods seems simpler and more direct, but it has in practice been found very cumbersome. Its essential weakness is that it involves a second set of symbols for the same ideas. The indirect method has proved to be much more simple and effective and resourceful.

With respect to its fundamental principle, written language has taken certain typical forms. One of these forms involves the use of hieroglyphs or picture-writings. Here the visible signs are natural or more or less conventionalized figures of objects. The hieroglyphs may be ideographic—may stand for things or ideas directly and without regard to any spoken sounds. Ideographs are of two classes. They may be representative, that is, they may actually indicate the object which they picture. On the other hand, they may be symbolic, that is, they may use the pictured object to stand for some other object or for some general idea. For instance, a circle may indicate the sun, a waved line may

indicate the sea, a lion may indicate courage. It hardly needs to be pointed out that such a system may often be very obscure and may become very unwieldy. For one thing, the ideographs of a given language may often run into many thousands. The contrast of this with an alphabet of twenty-six letters is very striking. However, hieroglyphs are not always ideographic. They sometimes represent sounds which in their turn represent ideas or things.

The ideographic principle gives way to the phonetic. Here the written characters represent vocal sounds. Written language and spoken language are united, because the visible signs stand for the spoken words. The first application of this principle produces syllabic systems of letters or signs. Here the characters stand for the sounds of syllables, and words are formed by combining in proper order the characters which stand for the several syllables of the word. This is fairly clear and relatively convenient, but it may be either unduly cumbersome or else unduly limited. It would require many characters to represent all possible or desirable syllables. Possible limitation is illustrated by the fact that in transliterating a word, say from English to Japanese, a particular syllable of one language may meet with no character in the other by which it can be represented.

Striving for a freer and more effective method has gradually led to the development of the alphabetic principle. Here the several signs or letters represent separate vocal sounds. This reduces language to its

primary sound elements. These elementary sounds can be represented by comparatively few letters—twenty-six in English and German, twenty-one in Italian, thirty-three in Russian, forty-two in a proposed scientific English alphabet. With these few letters can be written all the words that can be spoken. The letters are purely arbitrary signs representing sounds and can be combined into words; the words themselves, whether written or spoken, are purely arbitrary signs representing ideas. The system is artificial and indirect; but it is so ingenious and so simple in principle that it removes many difficulties which are inherent in more natural methods. By it, written speech has all the advantages of oral speech except the very important advantage of personal presence. In addition, it makes possible communication at a distance and also the recording of speech for the use of future generations. Of course modern invention has now made it possible to record the spoken word as well as other sounds.

It is as needless as it would be futile to attempt anything like a summary of the countless divergent ways in which language may serve as a medium of intercourse between man and man. Its uses and its necessity in connection with every phase of our social life are a matter of common knowledge; and surely the messages which pass backward and forward in every hour of every day are "as the sand of the sea, which cannot be numbered for multitude." Language is so familiar to us that we take it for granted. It is an element of daily life so assured and so accepted that it seems almost

like a part of the order of nature. We are hardly more conscious of its common use than of the air we breathe, and we seldom stop to realize how great a human achievement it really is or how much man owes to his capacity for speech. We can find the readiest measure of its value chiefly in negative ways. How pitiful, for instance, would be the case of a person who was deaf and dumb and who could neither read nor write nor use any language of signs more expressive than natural gesture. If we travel in a country like China and see the strange characters and hear the strange voices and find no one who understands our own speech, we are overcome by a feeling of helplessness and bewilderment.

If we try to imagine man as being entirely without language, we can hardly see him as more than an ignorant and unsocial savage. He has needed language in order to coöperate in practical effort. He has needed it still more in order to coöperate for the purposes of culture and civilization. He has needed it in order to think and he has needed it in order to record and communicate his thought. Language is the necessary instrument of our business. It is indispensable to our social life. It serves our commonest need as well as our highest discourse. It gives us opportunity for friendly communion. It puts into our mouths the words of consent or argument, of expostulation or command. Wherever we turn, we have occasion to speak and opportunity to hear. In large measure, it is language that gives to life its convenience, its safety, its inspira-

tion and its zest. It is the great bond of our fellowship with all who can speak in our tongue.

Beyond the advantages which it offers in connection with the ordinary and familiar intercourse of his social and business life, language is also of immense service to man in an intellectual sense. It helps him to build up the great structure of knowledge which is called science. No less is true in every other field of knowledge—in history and economics and sociology and education and so on. Without communication between minds, there could be little systematic knowledge, and language is the great means of communication. Man must gather knowledge largely from his fellows; and unless he can hear from his fellows, there is but limited opportunity to learn. Man gathers knowledge in order to share it with his fellows; and unless he can speak to his fellows, there is little incentive to learn. So it is the facility of language that makes science possible and that makes it worth while.

Language helps in the accumulation of knowledge and it helps also in the preservation of knowledge. Without written records, much would be lost or forgotten. With their aid, the whole body of knowledge can be stored up and kept for present or future use. In order that its communications and records may be more precise and accurate, science has even invented its own special language of technical terms as an addition to the general language of common life. Men have gone even further than this and have invented the special independent language of mathematics. An algebraic

symbol may speak just as clearly to the instructed mind as any word and much more accurately. Science likes to speak in this language whenever it is appropriate to the particular case. Mathematics has the added advantage of being a universal language. If the general language were also universal, science would be the gainer. It is concerned with the facts and the laws of nature. These are independent of race or nation and could best be expressed in a language open to all mankind.

Beyond the needs of practical life and the needs of scientific knowledge, men have also need to communicate with each other on the level of pure intelligence. They are striving together to build up the great structure of philosophic thought. Philosophy is interested in abstract thinking, and there is probably nothing more difficult to express in language and to convey from mind to mind. Language is often strained to the utmost and sometimes threatens to break down. Philosophy, like science, invents abstract technical terms as an addition to its resources of expression. More and more it tends to join with science in making use of the highly abstract language of mathematics. This it can do to great advantage because mathematics is at bottom a system of logic and therefore an effective instrument of reasoning. When other resources fail, the philosopher turns rather unwillingly to the use of similes and metaphors and all sorts of similitudes and analogies. The fact is that language has its roots in the concrete rather than in the abstract. It grows from below and

proceeds from things to thought rather than from thought to things. It is under constant strain to meet the needs of man's developing mind and growing knowledge. Its capacity increases with the higher and wider demand upon its powers. Philosophy does on the whole succeed in conveying its meaning.

To literature, language bears a still more close and intimate relation. Literature is moved by the impulse to expression, and for this purpose, language is its chosen medium. The still more significant fact is that literature is also one of the great forms of art, and here language is the material in which it works. Literature is therefore an endeavor to raise language to the level of art. Science and philosophy, in their use of language, seek above all things to be clear. Their purpose is to reveal the fact or the idea through a medium as transparent as possible. Literature seeks rather to be forceful and colorful. It would preserve clarity so far as possible; but it would add the power of emotion, the vividness of imagination, the charm of beauty.

The figurative and symbolic language which science and philosophy naturally tend to shun is to literature as the very breath of life. Such language helps literature in its aim to embody thought in things, the ideal in the real. By the stress of this creative effort, language is raised to a higher power and is endowed with new capacities for utterance. Literary genius, by an alchemy of its own, can transmute earthen words into golden and can make language convey subtleties and implica-

tions and inspirations and glories and powers that elude the best skill of ordinary speech. It is in the musical and highly emotional language of poetry that human speech attains its greatest heights and manifests its greatest powers and achieves its greatest results.

In his endeavor to devise means whereby he may convey messages to his fellows and receive messages from them, man does not stop even with the wonderful achievement of language. Poetry already partly transcends those limits by adding the music of speech to the meaning of speech, by raising language to the level of artistic utterance. Art and music pass quite beyond the limits of language. Rather they have invented new languages without words. Painting and sculpture and architecture appeal to the eye through form and color. Through the eye, they appeal to the mind and the heart. They represent objects, they convey impressions, they suggest thought, they arouse emotion. Inasmuch as they embody their messages in visible objects, they can give to these messages an extraordinary degree of vividness and concreteness. They address themselves powerfully to the imagination. They do not, as a rule, so directly concern themselves with messages of knowledge or of thought; but nevertheless, a great work of art springs from great intelligence and appeals to the thinking mind. Knowledge and thought are embodied and vitalized.

Music is the most emotional and the most spiritual of all the arts. Curiously enough, it also seems to be in many respects the most sensuous. Doubtless this is

due in large measure to the fact that man's emotional nature covers a wide range, from the very lowest to the very highest, and to the additional fact that sound affects all varieties of emotion. Music uses the vehicle of sound and appeals directly to man's sense of hearing. Its indirect appeal is to man's emotional nature and through that to his mind. Through melody and harmony of sounds, it is able to touch the deepest springs of man's being. It stirs him to feeling, it arouses him to action, it inspires him to imagination, it exalts him even to spiritual ecstasy. Beauty of sound is transmuted into beauty of emotional experience. Poetry is thought surcharged with emotion. Music is emotion sweeping like wind across the deep waters of thought.

These, then, are some of the messengers and some of the messages which the soul receives in the place where it dwells in secret or which it sends forth toward whatever goals they may be able to reach. The soul is of spiritual essence, and it instinctively seeks other spirit in order that it may know and be known. It finds, however, that it cannot attain its end directly. A great sea of matter intervenes between itself and that which it seeks. This sea must in some way be crossed. It must send out its messengers on voyages of exploration. It must itself learn something of the sea and of how it may be navigated. Knowledge begins with its own body. This it learns in some measure to understand and to control. Through the body, it becomes acquainted with matter and with life. In a thousand ways, it learns the phenomena and the laws of this external world.

Having reached thus far, the soul learns that there are other spiritual beings like itself. If there is any way possible, it feels that it must reach them through the matter which intervenes. Its study of nature enables it to discover means by which this can be done. It examines the capacity of the various senses and organs and finds which are best adapted for its purpose. It invents languages. It invents science and philosophy and literature and art and music. Natural means of intercourse are supplemented by artificial means. Lower forms of expression are developed into higher. Man has triumphed over his environment and made it subservient to his spiritual ends. He would not be gainsaid in his purpose to hold communion with his spiritual fellows. His faith has been justified. He has established intercourse with other souls; and in that intercourse he has found the strongest evidence of spiritual reality.

By its explorations in the fields of matter and by its manifold communications with other men, the soul becomes more aware of itself, more assured of itself. It has in some measure unraveled the mystery of its own being and gained a clearer conception of its own nature. It can look deeper now into the abyss of self-consciousness. It may not yet know what it is, but it knows what it does. It has enriched itself with many-hued experience. It has become the master of itself by learning that it is the master of all knowledge. As man stands now at the windows of his house of life, the whole world lies spread before him. He has dis-

covered it, he is eagerly exploring it, he knows it in part and is pressing on to know it more. Without him, it would lie like a vast desert, empty and idle and unconscious of its own significance. He may cry rejoicingly, "Behold the world, O my soul."

CHAPTER IX

WIRELESS

MIND can communicate with mind through the medium of the body and the external world. From brain to brain, there is an unbroken series of physical causes and effects which can be accurately traced, a clear and continuous chain of physical objects through which these influences pass. One can, so to say, follow the wires from station to station. The question now naturally arises whether there is anything else beyond this. Could the human mind possibly have any sort of communication with anything outside of itself beyond the reach of the wires or if all the wires were down? Can mind reach other mind in any other way than through the nervous system and the senses and the objects of nature which are capable of causing sensation? In a word, is there, in this region, any such thing as "wireless"? Of course, it is well known that there have been many wide claims and emphatic assertions in favor of an affirmative answer. It is only fair to say that these have been backed by much impressive evidence and by not a little weighty authority. On the other hand, the idea has not yet met with anything like general acceptance or scientific sanction.

Without attempting to prove or to disprove, to argue for or against, we may find it interesting to consider the situation and the possibilities. The problem is one of tremendous import, both from a practical and from a theoretical point of view. If the idea must be entirely rejected, then no communication with other minds is possible except through the body, and no communication with remoter or higher spiritual beings—including God—is possible at all. If the idea be true, or if it includes even a small measure of truth, then the task of the materialist in explaining the world without the hypothesis of the soul is made immensely more difficult. Frankly, the region is one in which we must walk warily, putting aside so far as possible all prepossessions. It is a strange region, in which men must still grope their way. It is a region of wonder, where we are in danger of being misled by the dreamer or the credulous investigator or even the charlatan.

Communication between brain and brain is communication over the wires. Between brain and brain, be it noted, not necessarily between mind and mind. The wires extend from brain to brain, but the messages extend beyond the wires at either end. How do the messages get from sending mind to sending brain and from receiving brain to receiving mind? It is a clear case of transmission beyond the wires. Some potent yet mysterious agency unknown to science is able, so to say, to telephone the messages in at one end and out at the other. What and how? It is, of course, the old familiar problem of the relation between mind and

brain. How do they communicate in any way with each other? The interchange between mind and brain is still a confessed mystery. Yet the fact is acknowledged fact, as familiar as anything in our daily lives. Whatever may be the mystery of the process or the difficulty of explanation, we know that messages do get all the way through. Common sense, of course, offers its naïve suggestion that matter and spirit can somehow effectually act upon one another. Philosophy still wrestles in vain with the metaphysical problem. Science as such does not even profess to offer an explanation in its own terms. Of course, the materialistic hypothesis is not an explanation of the fact, but simply an evasion or denial of the fact. On this hypothesis, there is no need to account for communication between brain and mind, because there is no mind—or mind is brain. For those who believe in the mind, here is the first and most obvious example of wireless.

The phenomena attendant upon this intercourse between mind and mind are so much a part of daily life, so large an element in human history and civilization, that there is no need to dwell upon them. Yet let us not miss their remarkable and significant character. It may be said without any exaggeration that, of all the wonderful things in the world, there is nothing more wonderful than this communion of minds. Neither science nor common thought regard it as in any way supernormal or supernatural; but the so-called occult phenomena which arouse our amazement or our incredulity are in no degree more miraculous than this

familiar miracle. This normal function is perhaps the key to all supernormal manifestations, for it involves the fundamental mystery of the relation between spirit and matter. If this is possible, they are not inconceivable. If we could find the clue to this, we might have the clue to them and the test by which the truth or falsehood of their claims could be judged.

In this region of the normal human powers and functions, we are at least sure that the problem is a real and not an imaginary one. There is a vast body of recognized and acknowledged phenomena which really offers something to be explained. The facts are such that they cannot be explained away, and they certainly do not lend themselves readily to a mechanistic interpretation. They vastly enlarge our conception of the scope and the value of human personality and strengthen our conviction that man cannot be truly interpreted without the soul. We enter now into a more doubtful region. Here the very facts are still in dispute. It is claimed that there are certain phenomena which transcend ordinary human experience and do not appear to be subject to any known physical or psychological laws. It is claimed that at least certain exceptional human beings possess powers and functions that are supernormal if not supernatural. These claims are backed up by an impressive array of evidence and are endorsed by men of great intellectual ability and honesty and even of great scientific authority.

The consideration of supernormal phenomena and supernormal faculties has so far been inconclusive.

Perhaps the most significant result has been the growing conviction that there is really something there that is real and that will reward further study. It seems almost beyond doubt that there are phenomena and faculties of an extraordinary character—supernormal in the sense that their nature is not yet understood—and that they seem to suggest laws as yet unknown. What is to be the final interpretation of these supernormal manifestations does not yet appear. They may be relegated to the limbo of abnormal psychology. As knowledge grows and as further light is thrown upon them, they may come to take a recognized place as simply rarer and subtler forms of the normal. Some investigators are already studying them carefully from that point of view, gathering the data, testing them in the crucible of science, seeking to discover the laws that lie behind them. That is at present the most hopeful road and may reveal their true nature. There remains the possibility that still ampler knowledge may reveal them as manifestations of a spiritual reality which is called supernatural, not because it contradicts nature or because it is not, in the largest sense, a part of nature, but because it transcends the physical world. That, however, seems likely to remain a matter for faith rather than for knowledge.

In the meantime, there emerges into light the practical and important question whether the human mind is able to communicate with other minds—human or superhuman—in a direct way and without the ordinary intervention of the nerves and the senses. Is there any

wireless? Something like that is the claim that is made. If it is justified, what medium—material or spiritual—takes the place of nerves and senses? It is obvious that these supposed supernormal activities are likely to have some bearing on the problem of the soul, just as in the case of man's normal activities. The question thrusts itself on us in passing, and we dwell upon it not so much for its own sake as for the sake of its implications with reference to the soul.

Let it be noted that our chief concern is with the possibility of supernormal communication rather than with supernormal powers in general. The natural first step is the consideration of supernormal communication between living human minds. Here we are at first in the borderlands of recognized experimental psychology, a region at least dimly lighted by actual scientific knowledge or by fairly safe conjecture. Up to a certain point, psychologists are in substantial agreement as to facts and theories. Beyond this lies a more doubtful region, where the results of their investigations are as yet very uncertain and where their views are widely divergent. Still further on, is a region of darkness which they are not yet willing or not yet able to explore, a region where finer insight may discover deeper truth or where delusion and charlatanism may flourish.

It is apparent that there is no deep gulf fixed between the normal and the supernormal but that one shades imperceptibly into the other. The normal already contains much of the mystery that is characteristic of the supernormal, although our scientific studies are likely to

ignore this mystery in favor of the more tangible facts which can be weighed and measured and which therefore seem to represent the only truth. On the other hand, the supernormal often lies very close to the normal, containing scarcely more of mystery and almost as much of clear and unquestionable fact. As exploration is carried further, the supernormal diverges more and more from the normal. Mystery grows and fact diminishes, until at last it becomes uncertain whether there is any fact at all. When that point is reached, we pass from the region of knowledge into the region of faith.

In beginning the observation of supernormal communication, it is well to note first that modern psychology distinctly recognizes the fact that the human mind really has a secret and mysterious region lying beyond the lighted circle of immediate consciousness. Here go on activities and operations which are hidden even from the mind itself. They are unconscious or subconscious or extraconscious. Psychological literature now speaks familiarly and as a matter of course about the subconsciousness, using the term to designate this unknown region. In the subconscious self seem to be stored away the memories of all that we have previously experienced, whether consciously or unconsciously. This perhaps includes our prenatal memories as well, or even what may be called our ancestral or inherited memories. What the mind has long forgotten, or even what it never consciously knew, is there remembered. Under certain circumstances, these hidden memories

may step over the threshold of consciousness and be recognized by the mind. Sometimes the sense of recognition is very dim, as of something which the mind has once experienced but cannot tell where and when.

The subconsciousness is not only the place of hidden memories but likewise the place of certain hidden activities. These activities doubtless arise from all the past experience involved in the hoarded memories, and they in their turn become items of memory and causes of further activity. So there goes on a secret life of the soul, mysterious in its original causes and quite as mysterious in its relations to the conscious mind. It seems a not unreasonable conjecture that these subconscious memories and activities are due to the operation of the brain working more or less independently of the mind. If so, the subconsciousness is not a power behind the throne, dominating the conscious mind through its superior insight and wisdom. It is something of an inferior order, more physical and more mechanical, conditioning the mind, of course, even as the body does, but not really entitled to usurp the place of the soul.

The subconscious would hardly need present notice if it were not for the important fact that a great deal of what is regarded as supernormal communication seems to take place subconsciously rather than consciously. Sometimes both the sender and the receiver of a message may be fully conscious of the fact. Sometimes the sender of a message may not be aware that he has sent it, or the receiver of a message may not be

aware that he has received it, even though he may immediately proceed to act as though in obedience to the message. Sometimes a medium intervenes, and in that case, neither sender nor receiver may be aware. It may be that the medium is in a trance and may thus be a mere unconscious transmitter. Still further, even when both sender and receiver may be aware of the fact of the message, the actual process of transmission is usually if not always below the level of consciousness. Such cases make it abundantly clear that subconsciousness may have a great deal to do, indirectly if not directly, with supernormal communication between living minds.

Another supernormal manifestation well known to psychological science is hypnosis. Many of its phenomena are quite within the realm of established fact and its technique is well enough understood so that it may be practiced almost at will upon a proper subject. The psychological investigator may use it in his experiments, the physician in his practice. Yet, from the point of view of normal human experience, it is a strange and mysterious phenomenon. One human mind has power to dominate another and compel it to obey suggestions or commands. The hypnotized individual may be thrown into a hypnotic trance or may be left in full consciousness and in either state may be made to act as the hypnotizer shall determine. While under the hypnotic influence, the subject may be given a command to perform a certain act at a certain future time. He may then be restored to his normal condition; but at

the time appointed, he will perform the act apparently of his own free will and without realizing that he is doing it at the command of another.

The exact conditions which make hypnosis possible are not so well understood. Probably the hypnotic process takes place largely in the subconsciousness, at least so far as the hypnotic subject is concerned. This would suggest—if subconsciousness is the independent working of the brain—that hypnosis is largely a physical rather than a purely mental process. That is to say, it is an influence exerted on brain and nerves rather than solely on the mind. In any case, it appears to be a form of supernormal communication. However much brain and nerves may have to do with the matter, they do not perform their function in the ordinary way. Mind does influence mind, and brain and nerves do not bridge all the distance between. It is a case of wireless. This is not to say that hypnosis is due to any other than natural causes, but simply to say that the communication involved is supernormal in the sense that it is not entirely transmitted over the ordinary wires.

A still more evident example of supernormal communication between living human minds is to be found in telepathy. Indeed, this is the typical case of such communication. In the form of mental suggestion, it seems to be closely allied with hypnosis. In the form of mind-reading or of thought-transmission, it takes on a more distinctive character. Telepathy—at least in some of its forms—has been taken seriously by the psychologist and has been made the subject of investi-

gation and experiment. It is probably a fair statement of the case to say that many of its phenomena have been accepted as verified fact but that the subject as a whole has not as yet been received into official standing. The element of mystery about it is still so large as to deter the scientific psychologist from giving it a full and frank recognition. This attitude of caution is reasonable enough provided that it is not allowed to stand in the way of further serious and impartial study.

Telepathy would seem to lend itself most readily to observation and to experiment when it takes its most extreme and most typical form, but it is precisely in this form that it has thus far been found least verifiable and least credible. The form referred to is that in which one person voluntarily and consciously transmits his thought or word or image or impression, and another person voluntarily and consciously receives the message. The assumption to be tested in such a case is that mind can thus communicate with mind by some supernormal means of transmission. Except for the means by which it is supposed to be accomplished, such communication would be like the ordinary mental intercourse with which we are familiar, though perhaps somewhat less definite and specific. There is a considerable amount of evidence which seems to point toward the possibility of such communication, but not yet enough to compel recognition of it as an established fact. The special point to be noted is that such communication is supposed to be well within the limits of normal consciousness. The means of transmission are

of course obscure, but the means of our ordinary conscious mental intercourse are not altogether devoid of obscurity.

In another sort of case, the sender voluntarily and consciously transmits a message, and the recipient acts upon it or is mentally affected by it, even though he is not consciously aware that he has received it. It is as though the conscious mind of one person could transmit messages to the subconscious mind of another. The case is somewhat analogous with hypnotism. In still another sort of case, the recipient—or percipient—seems to be aware of what is going on in another mind, although the other mind has not consciously made any communication. It is as though the conscious mind of one person had access to the subconscious mind of another or could receive messages from it. It is analogous with what we know normally as insight or penetration. Such cases clearly involve the intervention of the subconscious mind, now on the one side and now on the other.

Sometimes the whole operation may be supposed to take place below the level of consciousness. This is likely to be the case where a medium intervenes. Of course it is still possible that the medium is conscious of the operation; but when the medium is in a trance, even this much of consciousness is eliminated. The use of a medium suggests that the whole matter is in some way dependent upon a special type of physical or mental constitution. If such supernatural communication is possible at all, it is not open to ordinary in-

dividuals but only to those who are endowed with certain supernormal faculties. Attention may here be called to another important distinction. Telepathy is supposed to be possible when sender and recipient are in contact with each other or when one or both may be communicating through a medium, but it is equally supposed to be possible when sender and recipient are at a great distance from each other or when one or both may not be communicating through a medium. Distance apparently offers no insuperable difficulty. It does, however, add somewhat to the mystery. Explanations that might seem plausible and adequate in the one case would hardly apply in the other.

Telepathic communication between living human minds may probably be regarded as supernormal rather than as supernatural. It is wireless, but the function of the wires is performed by some other natural means as yet undiscovered. It is probably otherwise when we come to consider the possibility of communication between living human beings and departed spirits. We can hardly conceive of this as taking place without the intervention of some supernatural agency. Of course, we can judge the matter only from one side. If departed spirits receive messages from living human beings, only they can tell how. The living may send out their messages by normal or supernormal means—wire or wireless—but it can hardly be supposed that these human means reach all the way. Whether the messages do actually get all the way through, men can judge only as they seem to get convincing answers

to them; but these may be only the echoes of their own voices.

For such reasons and others, it is not the messages sent by the living to the departed which have aroused chief interest, but rather the messages supposed to be sent by the departed to the living. Supernormal means might possibly account for the receiving of such messages; but it is hard to conceive of any supernormal human means that could account for the sending. The only possibility is that of supernatural agency. That of course is beyond investigation—matter for faith rather than for knowledge. Attention is therefore naturally concentrated upon the receiving of such messages. If they have really been received, they must have been sent—in some way. Whether they have been received is the question still in debate. How they have been received—if at all—is a subject for investigation. The matter has been studied by able men with varying results. A few are convinced of the genuineness of spiritual communication. Some are frankly skeptical. Some are still doubtful but continue to investigate with open minds. The task of investigation is beset by many difficulties. Evidence is hard to gather and hard to judge.

Sometimes spiritual communication is supposed to be direct to the person concerned, without any intermediary. Some person, for instance, has seen a vision of one who is dead, has heard him speak, has in one way or another received what purports to be a message from the other world. Such cases are of course very

numerous, and they range all the way from reports that are wildly fanciful to reports that would be regarded as authentic and convincing if they had to do with matters of ordinary human experience. Witnesses are often beyond reasonable suspicion as to their honesty and sanity and intelligence. Evidence is often positive and circumstantial. Yet there is always the lingering suspicion that somewhere and somehow there has been room for deception or delusion or mistake. Psychology has shown us how closely hallucination may simulate reality. By the very nature of things, such cases can hardly be brought under scientific observation and control. Therefore men are disposed to place very little reliance upon them. They may suggest the possibility of such manifestations, but hardly the probability and still less the certainty. Many of them we might accept if we were, on other grounds, already convinced; but they do not of themselves carry full conviction. We are in the region of ghost stories and haunted houses, and this has long been regarded as the field of imagination rather than of reality. It remains to verify or to disprove.

The task has been undertaken by many individual investigators and also by a Society for Psychical Research organized in England and later by a similar society organized in America. Many really great and authoritative names are associated with these researches. The subject has developed a literature of its own which contains the record of many cases investigated. The results thus far have been inconclusive. At least they

have not been able to silence the critic and convince the doubter.

Claims to direct spiritual communications are somewhat exceptional. Such manifestations usually involve the intervention of a medium, of some person of special organization or of special gifts through whom the supposed spirits are able to make themselves known and to transmit their messages. During the period of communication, the medium may be fully awake or else in a state of trance. Sometimes the message is conveyed by means of words spoken by the medium, sometimes by means of automatic writing or by the use of the planchette or the ouija board or some other device for spelling out words. In one way or another, consciously or unconsciously, the medium makes known what is supposed to have been communicated by a spirit or spirits. Frequently the spirit purports to be some person known to the person who is making use of the medium. The chief object of the spirits seems to be the giving of evidence as to their existence and identity. Often their message have every appearance of genuineness and are convincing to the person concerned.

The messages received in this way are usually of a trivial nature and do not often speak of high spiritual matters. This has been made a ground of serious criticism. The answer has been that just such trivialities would best serve the purpose of establishing identity and that genuine information concerning the spiritual life could hardly be made intelligible to mortal understanding. This seems reasonable enough, but of course

there is the possibility of other and less charitable explanations. Certainly, when the departed spirit of some highly cultured and learned man descends to triviality and even illiteracy, it is hard to excuse him on the ground that he is trying to prove his identity. The fact is that the whole matter is mixed up with a great deal not only of triviality but of sheer nonsense and foolishness. The rapping and thumping and table-tipping and clasped hands and darkened rooms and what not have more the air of legerdemain than of spiritual manifestation. Even if the spirits may very properly refer to trivial incidents in order to prove their identity, why need they make mountebanks of themselves for such a laudable purpose? Of course such a judgment involves an unjustified assumption of knowledge as to the ways of departed spirits. Maybe they are like that. If so, we need hardly feel any great enthusiasm for their acquaintance.

In spite of all this, the question still remains whether there is not something genuine in the claims and in the phenomena. There would seem to be mediums whose good faith is above suspicion and whose refinement is not open to criticism. In such cases, we may believe that there are at least genuine psychological manifestations of a supernatural character, whatever these may indicate as to the actual occurrence of spiritual communications. Those who are still inclined to disbelieve often refer to telepathy and mind-reading as serving to account for the phenomena. They do this as though telepathy were already an established fact, and it is

rather curious to see investigators attempting to discredit one mystery by assuming the truth of another which is scarcely more credible. It is not impossible that telepathy may account for some of the phenomena; but the claim is made and seems to be justified that many are entirely beyond its reach and that others are much better accounted for by the theory of spiritual communication, unless we begin by rejecting that theory as impossible—which of course would be begging the question.

The sum of the matter is that men are faced by a great multitude of phenomena which cannot be adequately accounted for on any other known theory—barring fraud—than that of spiritism. If spiritism could be accepted, it would be adequate to account for them. Yet the evidence so far offered does not suffice to prove the theory. The only alternative is that the phenomena are to be accounted for by some cause or causes as yet unknown. The instinct of most men will be thus to hold the matter open and await further light. That attitude is quite justifiable. What is not justifiable is to dismiss the phenomena as though they did not exist or to assume that the theory of spiritism is an utterly impossible one. That would be to leave the matter open on one side and close it on the other. The theory of spiritism cannot be summarily rejected without due examination. On the other hand, if it is to be fully accepted, it must as yet be only on the ground of faith rather than of knowledge.

The question of intercourse with departed spirits is a

one-sided one, a question of what we receive and not of what we send. So likewise is the question of intercourse with spiritual reality—not now of intercourse with departed spirits, be it understood. The question is whether man does receive spiritual communication of any sort—definite message or spiritual influence—from any source outside the limits of time and space. The belief in such spiritual intercourse is one of the oldest in the world. Socrates, for instance, believed in his *dæmon*, and Socrates was not a man to be misled by superstition or baseless fancy. The Greek oracles professed to speak truth by spiritual inspiration. The Hebrew prophets believed themselves to be spiritually inspired and informed. Examples might be gathered from every age and from every people. Each of the great world religions has claimed to have its inspired revelation of spiritual truth. The idea of spiritual inspiration and influence has come down to us from all the past, backed by an almost universal belief, but it has been mingled with so much of fancy and superstition and naïve thought that we cannot easily distinguish its truth from its error.

Emerging into a scientific age, already strongly bent toward mechanistic interpretation of all phenomena, this belief and testimony of the past has not received the consideration which it deserves. It should not be ignored as mere delusion or dismissed as unworthy of serious regard. It ought to be pondered again in the light of modern knowledge. The idea is of the past, but it is also of the present. Probably many millions of

people are still influenced in their daily lives by a dim sense or by a positive assurance of spiritual guidance and comfort. The idea is a familiar one to all religious people, but it takes other than religious forms. It is common, for instance, to speak of great genius in literature or art or music as due to inspiration, and the word stands for something more than a mere figure of speech. We may find something not altogether dissimilar in ordinary experience.

Many have been aware of warnings and premonitions and intuitions and strong impressions which seemed to have no recognizable origin. Verestchagin, the Russian painter, is reported by his physician as having said at Port Arthur: "I feel I shall meet my death here." The physician told him that the feeling was due to his fever. He perished shortly after on a Russian warship. There are many such instances, and we can hardly doubt that they frequently occur. They do not prove anything with reference to spiritual interference with human affairs; they only raise a question as to its possibility. Men have such experience. Like the inspiration of genius, no one can "tell whence it cometh or whither it goeth." Perhaps it comes from the subconscious; but if so, the subconscious itself may be a vehicle for spiritual influence.

A case of special interest and importance in this connection is that of the great mystics. Here we find men and women who make a very definite and unequivocal claim to have had direct and intimate experience of spiritual influence and even of spiritual communion.

Some of them have been among the very greatest of human beings, whether for character or for intelligence. They do not seem to have impressed the men of their own time as lacking in sanity or balance or practical sense or as being in any other way abnormal. Aside from their strong conviction of vivid and immediate spiritual experience, they do not seem abnormal even to us. We should not beg the question by assuming that such conviction or such experience is itself necessarily abnormal. That is precisely what we do not know. These men and women have also a right to be heard on the question. We are not bound to accept their view of the case; but we have no right to close our minds against it or to decide the question without giving it due consideration. Such experience may ultimately appear to be pathological; but possibly their spiritual vision is a real insight.

Even if the testimony of the mystics could be fully accepted, it would not necessarily bring the matter to a final conclusion. There would still remain the problem of interpreting the meaning of their mystic visions. They have had certain experiences, for which we accept their word. It would still be necessary to ask whether these experiences did—as they suppose—really spring from spiritual rather than from natural sources. That is what we cannot know. We can only believe—or disbelieve. Knowledge here reaches its limit. We may refuse to go beyond that. If we do go further, it must be on the ground of faith. The agnostic position is the most logical one; but, in this case as in so many others,

it is a very difficult position to hold. One cannot remain forever balanced on a mathematical point. We do not know, but practically we must decide. If we do not know, we have no right to deny; but it does not follow that we have no right to believe. Faith is constantly and necessarily going beyond knowledge; and here as elsewhere, it seems a legitimate enterprise.

Our idea of spiritual reality centers in the conception of God. Is it possible for man to have any experience of divine presence and influence, to receive any light from a divine source? Again the mystic gives an affirmative answer and appeals to his own direct spiritual intuition. Revealed religion is of course a claim of divine revelation. It is a matter of common knowledge that the doctrine of the presence and the intervention of God is in some form as widespread as humanity and is accepted by great multitudes of men with more or less of confident assurance. It may be answered that modern knowledge makes such naïve conceptions of God no longer possible, that God must now be conceived—if conceived at all—as an infinite spiritual force energizing the world, as an infinite spiritual law determining the universe. Even if nothing more than this be allowed, God must in some sense impart himself to man, as a part of nature if not in any sense more private and peculiar; “for,” as Tennyson says, “if He thunder by law the thunder is yet His voice.”

Such a conception of God as mere force and law is not, however, exactly to our point. The question is a

wider one. Does God—through nature, at least, if not otherwise—reveal himself as intelligence, as mind, as something for which we have no other word than personality? Does he, so to say, express himself in terms which are intended to appeal to human intelligence and to human feeling and imagination and intuition? Men may as yet understand but imperfectly, but they may be convinced that there is a real divine message to be understood. Nature may reasonably be regarded as a great hieroglyphic scripture whose meaning is being gradually unfolded. Science and philosophy and art and literature are man's endeavor to make plain that meaning. Nature is a volume of almost infinite extent and content, and men have as yet hardly learned more than its alphabet.

It may well be that all nature is the symbolic expression of God's thought and that in this lies its chief purpose and significance. Symbolic expression is in itself a sort of wireless. It expresses the inexpressible and conveys more than is said. The world is a machine, symbol of divine activity. It is also a work of art, expression and symbol of divine thought to finite minds. It may even be that man is the revealing symbol of God and that our human conceptions of God are not quite so anthropomorphic as they seem. The deeper truths of the world we can know only in symbols. The symbol passes, the truth remains. It may be even so with the great symbol which is nature. Meanwhile, it serves to adumbrate spiritual truth.

Always—in religion and elsewhere—men are striving

to reach beyond the symbol to the truth, but never quite succeed. Yet we feel that truth is there. More than that, we feel that mind is there; for truth is not mere conformity to fact, but rather the correspondence between fact and the thought of mind. We cannot candidly study the world from any point of view—scientific, philosophical, poetic, religious—without an instinctive feeling that it bears the evident impress of thought and therefore of mind. It speaks to intelligence and thus bears messages from the mind of God to the mind of man. Such a judgment is of course not a matter of demonstration but a matter of faith. Yet is not this intuition the most natural and the most reasonable interpretation of the facts of the world and of human experience? If this faith be not justified, what becomes of all the meanings which have been discovered in the world by science and mathematics and philosophy, not to speak of poetry and art and religion? Did man put the meanings there himself? Has he been interpreting them into nature instead of interpreting them out of nature? Has he indeed heard nothing but the echo of his own voice reverberating in empty space? Or has he perchance heard far off the voice of God?

This region of the supernormal and the supernatural is a region where the traveler sees strange shapes in the twilight and guesses stranger shapes in the darkness. It is impossible to pass any final judgment upon the phenomena which are encountered there; but surely they are not to be put aside as something without significance. Even if we should go no further

than is approved by official psychology, we come upon manifestations and functions which almost seem to draw aside the veil that hides the soul. If we venture upon the obscurer paths which have been explored by men of somewhat greater boldness but still of recognized authority, this sense of the presence of spiritual powers and values is still further confirmed.

Beyond this lies a region of mystery, where as yet there is no footing of scientific knowledge, a region whose darkness can be penetrated only by conjecture and by faith. The human soul is ever impelled to press on beyond the bounds of knowledge, not in blind credulity, but with earnest endeavor to foresee whither the road of further knowledge is likely to lead. It cannot be content to wait in complacent agnosticism until the road is actually built. It must not only walk but fly, must not only know but believe. This forward-looking impulse is not scientific; but without it, there would be no science. Sane and reasonable faith is at once the friend and the harbinger of knowledge. It is the soul that knows, and it is also the soul that believes. By both its functions, it challenges the doubter and justifies its own reality.

CHAPTER X

"WE ARE SEVEN"

MEN have never been able to prove immortality; they have always believed in it. Even when they have felt logically compelled to doubt it or to deny it, they have continued to act and to think as if it were so. If it be not true, it is one of those necessary fictions which men must cherish in order to live. Their plans, their purposes, their foresights, their ideals, are based on the tacit or expressed assumption that death does not end all. They seem in many ways to act as though in obedience to an instinct which tells them that men ought to live as if they were to live forever. The very soul within them seems to have a profound and native intuition of its own indestructible character and its own continuing life. If all belief in immortality could be eliminated from the historic life and activity of man, the record of what man has been and done would be impoverished beyond all conception. In almost every department of his life, there would have been limitation and loss. Very much of his best and noblest achievement would have had no aim or incentive. If this conviction had never existed, the human world would be something very different from what it is to-day.

The past would have had a very different influence upon the present. The development of religion and ethics and morality and education and philosophy and literature and art and social life would have been immensely restricted or would have moved on very different lines. China would not have worshiped its ancestors and Europe would have built no shrines to its saints.

What of the present? Is the case any different with us than it was with our forerunners? If all hope of immortality could be taken out of the minds and hearts of men to-day, would not their spirit begin to fail, would not their incentive and their achievement become less? Would they not be tempted to live their lives upon a distinctly lower level? Would they not begin to ask themselves, What is the use? What is the use of love and fidelity and loyalty and self-sacrifice, of education and culture and social service and civilization, of philosophy and science and literature and art, of morality and self-discipline and aspirations and ideals? The strongest, of course, might steel their hearts to endure with a stoic fortitude and resignation. The bravest might arm themselves with a cheerful courage to face the common human lot. The noblest might be content to "join the choir invisible." But the multitudes of men would lack that sustaining force of their own souls and would be tempted to say: "Let us eat, drink, and be merry, for to-morrow we die."

Humanity has needed and still needs the hope of immortality. Is this hope, then, merely a will-o'-the-wisp

which man has invented in order to delude himself? Is it a trick of nature to keep him in life and movement? Or may his desperate need of such a hope be a good ground of assurance that he will find it justified by the nature of things? Nature does not create appetites and impulses without any possible goal of satisfaction or realization. Does the analogy hold good with regard to man's spiritual function and spiritual need? "Blessed are they which do hunger and thirst. . . . for they shall be filled." It is a law of the physical world. Christ declares it to be a law also of the moral world—as true of righteousness as it is of bread. Is it not a reasonable faith that it may prove to be equally a law of the spiritual world and that it applies to man's hunger for immortal life?

When man hungers for bread, he finds in nature the necessary materials and makes bread. When he hungers for righteousness, he finds the necessary moral elements and creates righteousness. When he hungers for immortality, must he create his own immortality? Is immortality not merely something to be accepted but something to be achieved? Must man find out in life and build into his own personality the elements which endure, so that, when the wood and the hay and the stubble of life are consumed by the fire, the gold and the silver and the precious stones shall only be sublimated and refined? The thought that he must achieve immortality by his own effort would inspire him to develop within himself the spiritual life which alone could raise him above the changes and chances of the

material world. That would indeed present to him another life worth living, not a life of harps and crowns and streets of gold and endless hallelujahs, but a life that would praise God by unending endeavor to grow in spiritual character, in order that his soul might still be worthy to endure.

We may fairly assume that if life is to achieve immortality, it must first achieve the soul. Here again the soul is indispensable. If there is any immortality, it is the soul that is immortal. We are accustomed to think of soul as belonging exclusively to man. We cannot be sure. Soul—like intelligence—is perhaps a relative term. It may find its first beginnings somewhere below the human level but attain its recognizable character only in man. If all men have souls, some of them would seem to be still rudimentary, hardly if at all above the brute level, showing little if any evidence of ability to attain a fuller growth. It is perhaps this very ability to grow which more than anything else distinguishes the human soul. If any human souls are incapable of such growth, they are to all intents and purposes merely animal. Can we conceive of such souls as having any prospect of immortality? At what point, then, do souls become capable and worthy of such a hope? The most reasonable law would seem to be that souls should have in them the capability for a progressive development which would need more than this limited human life for its full realization. If they need immortality in order to attain their fullest possible growth, that is the best reason why they should have

it. The power to live is the best promise of continued life. The soul of a brute may fear death, but it can have little conception of any worthy use for an immortal life.

Man hopes for immortality, believes in immortality, finds it necessary to his life to cherish the conception of immortality. Can he give himself any real reasons to justify his faith? The hope, the belief, the need, are not enough to prove immortality as unchallengeable fact. Let us say frankly that there is no proof of immortality in that sense. It is useless to make the attempt, for such a matter is beyond the reach of demonstration. The attitude of the soul toward that great question is rather a demonstration of the soul itself. It will not accept refutation. It remains unmoved by doubts and fears. It listens to argument but it passes beyond argument. It weighs all the negative evidence but is still unconvinced. It abides by its own intuition. There are no phenomena of immortality to be studied—except the soul itself. The indomitable, tenacious, self-assured, indispensable soul is the great phenomenon.

Yet the soul naturally seeks to justify and to fortify its faith and its intuitive conviction. If there is no such thing as demonstration or established knowledge, there is at least such a thing as reasoned and reasonable faith. The soul willingly seeks such reasons as there are. It does not find itself supported and confirmed as adequately as might be desired; but that is only natural, since the subject is one which is largely beyond the

reach of logic. Those who have sought from age to age to rationalize their faith in immortality have been continually shifting their ground, and not much has been added to the argument since Socrates drank the hemlock. Men have been especially distrustful of theological special pleading, with its oversubtle and wire-drawn arguments. If faith in immortality had depended upon argument, it would probably long ago have been argued to death.

Beyond the confidence derived from its native instinct and its sense of need, humanity has seemed to return again and again to a few large and simple considerations as the ground of its hope and faith. It has seemed to feel that, where no reasons could prevail, the simplest reasons were the best. When even these have seemed to be shaken by the assault of some mighty champion of unfaith, humanity itself has not been much moved but has continued to reiterate its faith with calm assurance. The characteristic attitude of mankind has really been very much like the simple and naïve attitude of the child in Wordsworth's poem:

O Master; we are seven.

When the soul is once firmly assured of itself, it cannot be easily shaken; it does not need much argument to convince it that it may be and probably is immortal. The soul is its own best argument.

When humanity is seeking light upon any momentous world problem, any problem beyond the reach of its own unaided common sense, it has three great resources.

In the first place, it may turn to critical investigation and experiment and induction, on the basis of all natural fact that comes within the range of human observation and experience. This is science. If then, we should interrogate science with reference to immortality, what would it have to say? Strictly speaking, the subject is outside of its legitimate territory. The business of science is to deal with the body, and no one is claiming that the body is immortal. Science does not even profess to deal with the soul, and until that comes into view, the question of immortality does not arise. So far as psychology has become science, it has been disposed to begin its investigations by first carefully locking the door lest the soul should intrude. It has thereby also shut out the question of immortality. There can be no problem of an immortal brain or nervous system. Science is dealing with what men know or can hopefully expect to know. It does not—and should not—deal with matters concerning which there is no present prospect of positively knowing anything. Therefore it is not reasonable to expect that science will be able to throw any positive light upon the problem of immortality. We can hardly hope to see immortality scientifically established or even supported.

It might be asked whether evolution does not offer really scientific ground for a reasonable assurance of immortality. Cosmic evolution seems little likely to afford convincing evidence. The indestructibility of matter or the conservation of energy, for instance, prove nothing with reference to the indestructibility of the

soul or the conservation of vitality. Within the limits of cosmic evolution, however, life emerges and biological evolution begins. It is probably evolution in this sense that is usually thought of as having evidential value with reference to immortality. The general idea is that death cuts off and defeats the evolutionary process and that evolution therefore implies the continuance of life. This is at best but a doubtful assumption. It involves a mistaken idea of biological evolution. In the first place, biological evolution has to do with the body and not with the soul and of course presents no evidence of immortal bodies. Then, too, biological evolution is not an evolution of the individual, but an evolution of life through individuals. So far, therefore, as it may suggest any continuance of human life in order to fulfill its implied and inherent purpose, the life would be that of mankind rather than of individual men. Biological evolution, therefore, does not give evidence in favor of individual immortality. So far as it suggests anything of the kind, it is a continued development of humanity so long as human life endures.

While all this is true, however, of biological evolution in the ordinary sense of the term, it should be recognized that the idea of evolution may be given a wider scope. Within the limits of biological evolution, mind emerges, and that may mark the beginning of still another form of evolution. This might be called psychological evolution. It would involve the progressive development of mind or of soul or of personality.

Perhaps within its limits may emerge some new phase of being as yet inconceivable—as miraculous as matter or life or mind. We do not yet know its laws, and these may be as different from the laws of biological evolution as those are from the laws of cosmic evolution. In one respect, we have a hint of fundamental difference. The law of biological evolution seems to be a law of competition, a law involving struggle and the survival of the fittest. The law of man's social evolution is rather a law of coöperation and of mutual helpfulness. Probably it is the latter law—the law of altruism—which would be dominant in the evolution of souls.

What light this sort of evolution may yet throw on the problem of immortality must still be a matter of conjecture. Maybe it also is an evolution of the race rather than of the individual, implying the development of higher intellectual and spiritual types rather than the continuing life of the individual. Yet it must be confessed that this explanation of the matter seems far less adequate in the present case than it was in the other. When it is a question of inanimate objects, we feel no great sense of loss in the fact that multitudes of individual forms may be made and broken in order that the general purposes of nature may be attained. Even when it is a question of living organisms, we find it not unreasonable that individual bodies should be merely temporary means of transmitting life forces and helping to evolve life purposes. In the case of mind or soul or personality, however, the situation is dif-

ferent. These do not seem to be mere means to an end but really ends in themselves. So far as we can guess the purpose of this evolution, it would seem that that purpose could be best attained, not by using temporary personalities to produce other personalities destined to pass away in their turn, but by giving each personality time and opportunity to go on to the complete development of all its possibilities. Inanimate forms or living organisms can fulfill all their functions within the limits of time and space and matter. Souls are capable of further development.

We have already passed from the territory of science to the territory of philosophy. Here is the second great resource of humanity in seeking light upon its most difficult problems. Does, then, philosophy throw any light upon the problem of immortality? It does throw a great deal of light, although that light is far from being a complete or final illumination. One of the difficulties is that, while the possibility of immortality depends very much upon the nature of the soul, the nature of the soul does not necessarily prove anything with reference to its ultimate destiny. Philosophy might conceivably show that there is no soul or that the soul is of such a nature that its immortality is not to be thought of, but even if it could show that the soul is of such a nature as to be capable of immortality, it would still fall short of showing that it really is immortal. Even this much will depend upon the ability of philosophy to discover the nature of ultimate reality. It has never been able to reach a ground of common

agreement upon that question; and probably both the problem of reality and the problem of immortality will forever remain beyond the reach of human reason. This is only to say that the mystery of the universe must remain forever a mystery.

Philosophy labors under certain other disadvantages. In the first place, it is carried forward largely by the work of independent individual minds, each with its own intuition of truth and its own lines of reasoning. The result is that there are almost as many theories as there are philosophers and very few conclusions that are accepted by all. On any given question, we have varying opinions of different philosophers rather than any recognized verdict of philosophy. To be sure, there are certain philosophical schools and these represent a certain consensus of opinion; but this perhaps only tends to accentuate differences between the schools. It has been said that all thinkers are either Platonists or Aristotelians; and so far as this is true, it would indicate that there are two general streams of thought, idealistic and realistic, to which other and smaller streams are tributary. In the main, idealism is favorable toward the idea of the soul and of immortality, while realism is likely to be opposed to that idea. The great classic utterance concerning the immortality of the soul is that of Socrates in Plato's *Phaedo*. It is presented with the consummate skill of a great literary genius, united with the profound thought of a philosopher and the vision of a seer. Socrates speaks in the imminent presence of death, for he is soon about

to drink the hemlock; and his calm philosophical reasoning is made all the more cogent and impressive by his heroic fortitude and steady assurance.

This brings us to another disadvantage of philosophy. Thought must be based on knowledge; and with every important and significant advance in human knowledge, philosophy must shift its ground and revise its conclusions. Previous thinking becomes obsolete and needs modification or restatement. However important certain theories may be as a part of the history of philosophy, they no longer represent the terms in which men think. Greek philosophy, for instance, is forever memorable in the history of human thought; but it was based upon very inadequate knowledge of the world and can no longer speak to us with the voice of authority. Plato's argument for immortality is no longer convincing except so far as it may be endorsed by more modern philosophy.

The tremendous extension of scientific knowledge in our own day brought about a revolution in human thought. Practically every philosophical doctrine of the past was called in question. Philosophy found itself under the necessity of reëxamining its very foundations and almost in the position of having to start all over again. It could not ignore the new knowledge, and this new knowledge made a vast difference in all thinking about the nature of reality. The result is that older doctrines have had to be set aside or held in abeyance until they could be restudied in the light of modern science. All this applies to the doctrine of immortality.

Former conclusions will not hold unless philosophy is prepared to reassert them under the new conditions. Science, of course, has no right to demand that philosophy shall stay within scientific limits or become merely a branch of science; but philosophy is bound to recognize what science has come to know, and thought is not free to contradict knowledge.

Philosophy can no longer insist upon the older doctrine that the soul is indestructible because it is spiritual, for now the very existence of the soul is called in question and spirit is made to seem but a subtle emanation of matter. Science might point out that matter is likewise indestructible. It seems an effective answer, but it overshoots the mark. If matter is indestructible, why not thought, why not the soul? Science might answer: "First prove your soul." Philosophy might reply: "First prove your matter." So they would be back at the beginning, facing the fundamental question, What is reality? Science might be willing to grant that, if soul is reality, the soul may be indestructible, and therefore immortal. Such an admission is all that could fairly be asked. It defines the issue and places it just where it belongs. If the soul is not real, there can of course be no question of immortality; if the soul is real, its immortality may be fairly assumed. Of course the question would still remain whether this immortality is individual and personal or whether the soul, like the varied forms of matter, is resolved, so to say, into its original elements.

Philosophy still finds it possible to insist that the

ultimate reality knowable to man is experience. Science can hardly deny that, for experience is the very corner stone of the scientific structure. Experience is not to be defined; it is the ultimate reality, directly known, in terms of which everything else must be defined. It certainly seems to imply the soul, for if experience is reality, there must be a subject of experience as well as an object. Philosophy also still finds it possible to insist that all appearance is in some sense a part of reality. It is so in the sense that it is a part of experience. It may be so in the sense that it is the guise in which reality presents itself to our acquaintance. Man is ever seeking to penetrate through the guise to find what lies beyond. So far he has only succeeded in finding other appearances; but these seem to be of a deeper and more significant character, and he confidently believes that they mark some progress toward the ultimate truth as yet far off. He has not yet succeeded in bringing immortality within the range of experience or even within the range of appearance. It still remains simply an inference from the soul. By the very nature of the case, "it doth not yet appear what we shall be." That must remain for future appearance and for future experience.

The search for truth may lead toward belief in immortality or may lead away from it. This will depend upon the direction in which the search is carried on. Science puts the question aside as something beyond its scope and confines its attention to the investigation of natural fact. In so doing, it might seem to be taking a

contrary direction, but this is not strictly true. It is simply recognizing its proper limitations and not definitely taking any particular direction. It is willing to investigate any facts that may appear and would be willing to follow wherever these might lead. With reference to questions that lie as yet beyond its range, it is unbiased, neutral, impartial. From this neutral territory, where nothing is recognized but natural fact and its probable interpretation, philosophy starts off in various directions, each philosopher along the road which seems to him most hopeful or which is determined by his temperament and training.

If one conceives the world in the dualistic sense and is seeking to discover what may be regarded as true on that understanding, it is quite possible that he may come to a belief in immortality. The independent reality of spirit is taken for granted, and whatever is possible to spirit will be within the range of belief. There is no likelihood of positive proof, but at least any arguments that tend to confirm man's faith and hope will be likely to receive fair and friendly consideration. The great multitudes of men are naïve dualists, because dualism seems the natural and obvious interpretation of the facts as they are known to ordinary experience. Doubtless that is the reason why men so widely cherish the hope that is strongly suggested by their evident human need and by their instinctive human yearning.

If one's philosophy is materialistic, the case is, of course, quite different. The original assumption is made

that there is no such thing as spirit. Therefore there is no immortality, because there is nothing to be immortal. Matter is indestructible, but its forms are constantly changing. Nothing remains permanent except the essential constituents of matter. Life is one of the shifting phases of matter. It depends upon a particular organization of material particles. When this organism is broken up, the life is gone. All that remains is the handful of dust that was once a man or an animal. With the life, goes all that has been known as thought or mind or spirit or soul. Those were but the temporary phenomena of life, as life is but a temporary phenomenon of matter. According to materialistic philosophy, "dust to dust" was also "spoken of the soul." Materialism very properly starts on the ground of science. Its weakness is that it is unable to advance from that ground. Science offers a good point of departure, but it ought not to be a permanent resting place for philosophy. That makes philosophy a mere interpreter of science and debars the mind from all independent exploration into regions where as yet only reason and speculation can penetrate.

The procedure of idealism is far otherwise. It begins by assuming something of which science has no knowledge, namely, spirit. It does not, therefore, even start from scientific ground. It even ventures to propose to science an entirely different basis for its structure. Spirit, it asserts, is the ultimate sole reality which underlies all the natural phenomena which science is seeking

to investigate; spirit is what science will come upon at last if it is able to carry its investigations far enough. Idealism begins by trusting its own immediate intuition, by accepting the reality of spirit, by interrogating the soul. If there is only one form of reality, it must be spirit rather than matter. Of course, this seems to the common man like a denial of matter, and such a conception is very far away from his thought and experience. Nevertheless, it seems to confirm his own naïve conviction that there is such a reality as spirit and that there is good philosophic reason for his belief in the soul. While it offers him no positive proof of immortality, it at least assures him that immortality is not utterly out of the question.

Perhaps the most cogent argument that philosophy has to offer in favor of immortality is the argument that certain great values of the universe would otherwise be lost. It is an argument which is not less valid but rather more valid in the light of all modern knowledge. One aspect of the matter has already been approached in our inquiry as to whether the attainment of the purposes of evolution may not imply immortality. The actual or potential results of evolution are values to be conserved. The answer of science seemed to be that evolution might promise the continuance of racial life but not necessarily of individual life. We found ourselves passing over from the domain of science into the domain of philosophy and inquiring whether there was not an evolution of mind or soul or personality which implied immortality as necessary for its fulfill-

ment. Philosophy takes up the problem at this point and carries it further, making it not merely a question of the purposes of evolution but rather a question of all the spiritual values that have been or that may be created. Its point is that, if the life of man must cease with the death of the body, certain existing values will be forever lost and other potential values will remain forever unrealized. Its further point is that immortality would enrich the universe by giving it vastly greater value and significance.

✓ Philosophy urges that the soul of man is the creator of many spiritual values that would pass away with itself. These, moreover, are the most precious values which the universe has yet been able to produce, at least so far as our knowledge goes. Out of matter, life has emerged. Is it conceivable that the universe should lose that value, once it has been gained? What a rich heritage would have been lost. Aimless and unconscious the worlds would swing through space and no eye would behold their lights, no ears hear their music, forever. Yet, amid the chances and accidents of matter, life might well be lost unless it can preserve itself unscathed beyond the destruction of the body. Out of life, mind has emerged. Is it any more conceivable that mind, having once been gained, should be lost again? It is the pearl of great price for which the universe has sought and suffered and for which it might well barter all other treasure. Without it the universe practically forfeits its own existence, for it would remain forever unknown and unknowable. Yet if life should pass mind also would be gone. How else than

through immortal life can its safety and permanence be assured? It is not enough that successive minds should gather up and store away the riches of knowledge and thought and feeling and imagination. These might all be swept away in some cataclysm of nature. Immortality alone can satisfy the human mind that these values will be preserved.

In its estimation of spiritual values philosophy lays special stress upon the soul itself, not merely as mind, as an instrument of knowledge and thought, but rather in its deeper and broader sense as personality. So far as man can judge, the universe has achieved no greater or more significant value than this. It is the value that illuminates the meaning and determines the relative rank of all other values. It is a promise and a potentiality of development which cannot as yet be wholly foreseen. It is both artisan and artist, an evident creator of actual values here and now, a dreamer of possible values still to come. If it is not to be lost or to be disappointed of its high purpose, it needs "the power of an endless life." There is no apparent or imaginable limit to the soul's possibilities of growth. Is it not therefore reasonable to suppose that there will be no limit to its opportunity for growth? There is nothing in the nature of the soul to suggest such a limit; it is suggested only by the perishable body. Under present circumstances, the soul seems to need a body, but that may be a temporary condition of its experience with the world of time and space and matter. When it is done with this experience, the material body may be no longer necessary.

It needs to be emphasized that soul value is individual and personal. Each soul is unique in quality and in character. Nature of course has her analogies—the individual gem, the individual rose, the individual dog, for instance—but these are only faint foreshadowings of the higher individuality which is the human soul. We do not on these lower levels speak of personality or of character, and these denote something vastly more important and significant than peculiarities of form or color or texture. The individuality of the soul is of a spiritual rather than of a material kind. The individuality of a material object does not count for very much. One object of a given sort will do almost or quite as well as another. With souls, it is different. When a mother loses a child, she does not cease to mourn because she has given birth to another.

If the soul be not immortal, then unique personalities are constantly being produced in the world only to be presently lost again forever. Their influence may continue for a time among men "in lives made better by their presence." Other generations of men may arise, superior perhaps to them. But the fact remains that something precious has utterly gone and will never achieve its eager purpose or continue its peculiar work. The universe would be infinitely richer if we could say of them, as Matthew Arnold said of his father:

Somewhere, surely, afar,
In the sounding labor-house vast
Of being, is practised that strength,
Zealous, beneficent, firm!

If such should prove to be the soul's destiny, then there would indeed be a conservation of all spiritual energy, a preservation of all spiritual values. Otherwise, the souls of Plato and of Shakespeare—of them, even—are as a dead dog.

This brings us to a third great resource of humanity when it wanders in darkness seeking light. It inquires of science and of philosophy, because these speak with the authority of careful research and of rigorous thought. When they have any enlightening word, it listens with respectful attention; but when their voices are silent or uncertain, it will not be content until it has inquired of other oracles. On all matters of spiritual import, it is especially eager to hear what may be said from the poetic or poetico-religious point of view. This is the point of view of reason, not when it is guided by cold and severe logic, but when it is inspired by imagination and emotion. These three—scientist, philosopher, seer—are the great explorers and discoverers. The great truth would be that on which they could all agree.

We may choose for brief example and illustration poets who lived in the age of modern science, who appreciated the message of science, and who had no antagonism to its spirit and methods. Wordsworth said: "Poetry is the impassioned expression which is in the countenance of all science." He had no idea that the two should be separated. For his assurance of immortality, however, he turns not to science but to childhood. The little girl in "We Are Seven" has no con-

ception of death as making any real difference. She has only the simple reply: "Nay, master, we are seven." The implied argument is that this very inability to conceive of extinction is itself an evidence of immortality. The argument is childlike but not altogether childish. It is not so simple as it seems. For aught we know, it may be the deepest argument of all. At least we may be sure that it counts for much in the instinctive belief of mankind. Wordsworth's great "Ode" treats the matter from a different point of view and with echoes of Platonic philosophy. Still it is the child on which he rests his faith. His subject is, "intimations of immortality from recollections of early childhood." To his poetic imagination, we seem to have come into this life out of another, "trailing clouds of glory as we come from God who is our home." It is an implied argument that the soul existed before this life and will exist after it.

In Tennyson's *In Memoriam*, a poet grapples with the doubts and fears that are raised by modern science and by the death of his friend. He is able to rest his faith in immortality upon the love of God and the love of man. Love feels in itself the potency of endless life. It is something "too precious to be lost." By the light which it sheds, man may at least "faintly trust the larger hope," "believing where we cannot prove." In "Crossing the Bar," there is a calmer and yet a clearer assurance; it is the assurance of inspired poetic vision. The poetic attitude of Browning is somewhat different. In "Prospice," written just after the death of his wife,

and in the "Epilogue to Asolando," written just before his own death, he strikes a note of fearless optimism. In "La Saisiaz," written soon after the death of a dear friend, he wrestles like an intellectual athlete with the great problem of human destiny. At the close, he declares himself one who "at least believed in Soul, was very sure of God," but who cannot by intellectual means clear away the doubts that hover over immortality. It is perhaps a typical case. When man strives by intellect alone to demonstrate immortality, he is doomed to failure. Intellect must be reinforced by imagination and emotion and intuitive faith; the philosopher in man must be helped by the poet.

On the whole, the poets speak in favor of the idea of immortality, especially when they remain poets and do not attempt to become philosophers. They do so because they have had a vision of the soul. Everything rests upon that. Without the soul, there can be no question of immortality. If there is soul, then immortality must be judged in the light of what the soul is, not in the light of what the body is. Man has had experience of the soul and has found reason for accepting the validity of that experience. Knowing thus much, he is bold to indulge the hope that the soul's nature is promise of the soul's life.



III

INTUITION

CHAPTER XI

"THE CANDLE OF THE LORD"

"THE spirit of man is the candle of the Lord." The utterance is from the Proverbs of Solomon, wisest of kings and men. There could hardly be an analogy more suggestive or more significant. The Lord of all things has indeed made man's spirit a center and a source of light. That spirit sheds forth its light upon the things of the world. By its own light, the spirit makes those external things visible to itself and likewise illuminates its own secret places. Without that first immediate seeing, man could not go on to examine, to study, to know and to think. This direct vision of the soul, by which it sees all things in the light of its own consciousness and its own faculties and its own innate intelligence, is what we mean when we speak of intuition. Intuition is, so to say, a kind of vision which sees by its own light.

The steps by which we undertook to pass from the original assumption of awareness to a belief in the soul are a series of intuitions. Belief in the soul, then, is an intuition based on many previous and more elemental intuitions. As we pass from spirit to matter, we must make the intuition of a not-self or of otherness and then an intuition of the body and an intuition of

life and an intuition of matter. It is necessary to make a still further intuition in order to arrive at the conviction of the existence of other souls. When we have taken these various steps, we have the framework of our world. The soul, the body, life, matter, other souls—these are the primal elements of human experience. However far it may be true that our apprehension of them is aided by our acquaintance with facts, we know them all chiefly by intuition.

It may seem that this is assigning to intuition a strange and questionable rôle. That is nothing compared with what we must go on to do. We must dare to assert that intuition is the great and only master guide in the pursuit of all knowledge. It makes the first venturesome leap toward new truth and then leaves science and philosophy and practical experience to see what they can make of its daring conjecture. Sometimes they prove it wrong, sometimes they prove it right. Intuition is by no means infallible, any more than any other human power. Sometimes it leaps in the dark and lands itself in error. It is worth only what it proves to be worth after it has been tried by all the tests we know. Such as it is, however, it is our only original guide to truth, and we must follow its guidance until we know better. Wherever it points out a path, we must enter upon it and see where it leads. The way which it indicates may turn out to be a no-thoroughfare. In that case, there is nothing to do but to back out and try again. We may find ourselves led into some false or ridiculous situation. In that case, we must seek

some other way. While intuition may thus often go astray, it is usually a safe guide. When it speaks with strong conviction and positive assurance, it is more than likely to lead to the discovery of new truth or at least indicate the right direction.

The fact is that intuition—like other human powers—is of many kinds and degrees. Sometimes it is mere fanciful whim or notion, and to take it seriously would be ridiculous. What we have in mind is the instinctive feeling of immediate knowledge, the strong and unquestioning conviction that we have looked on truth face to face and know that we know. Even then, we may be mistaken; but when we have such convictions, we hold them and act upon them and do not allow them to be shaken except by clear and convincing evidence that we are wrong. When they are corroborated by similar experience on the part of most other men, we regard them as assured and unchanging truth. Such intuitions are doubtless meant for the guidance of life and are to be trusted as implicitly as we trust our other human powers. The probability is that we would not think of doubting our serious intuitions if it were not for our critical intelligence. Intelligence has no prescriptive right to set aside our intuitions because they cannot be logically established. Its only right is to examine, to test, to disprove or confirm. It can also instruct. Intuition based on knowledge is of course infinitely better than intuition based on ignorance. It is well that intuition should be improved and enlightened by all possible means, for in multitudes of ways it is a

necessary guide of life. It disguises itself in many forms, but they all have the same essential character. They are guesses at truth.

One of the most familiar modes of intuition is what we call common sense. It is widely diffused among men and forms the basis for the general opinions and agreements of mankind. It might not inaptly be called the instinct of the mind, or mind on the instinctive level. Even the animal has a sort of animal common sense which includes instinct and may reach somewhat beyond it. The child begins to exercise this gift in arriving at his first naïve conceptions and convictions about the world into which he is born. Some of these are so just and so sure that they are never altered. The savage is but a larger child, and his mind acts in much the same way as it comes in contact with the reality around it. He, too, has assurances which even the philosopher or the scientist would not deny. Professor Mirsky, historian of Russian literature, speaks of "the mystically realistic mentality of primitive man." The evident implication is that the primitive human mind has a strong grasp upon reality and at the same time a deep instinctive feeling of an underlying spiritual quality in the world of things. Such a judgment springs from the common sense of mankind.

As intelligence grows, common sense becomes more enlightened and more self-conscious until it is hard to tell where common sense leaves off and deliberate reason begins. This is especially true where man is a member of a highly civilized and cultured society. He

stands as it were upon the heights of his own civilization and is thus able to see farther and more surely. If he be an individual of great intellectual powers and of thorough education, even his common sense may be raised to a higher level by his other gifts, unless, indeed, he allows it to be unduly hampered and restricted by his critical faculty. Common sense and high intelligence need not be in conflict with each other. Their natural relation is one of harmony and mutual helpfulness. In some of the greatest of human individuals, this harmony is most apparent. Philosophers are not likely to be distinguished above other men in this regard, but it would be hard to find anywhere two better examples than Confucius and Socrates.

Common sense, naïve or enlightened, is the daily guide of our practical life and of our relations with nature and with our fellow men. Its tentative conclusions are valid and "true" so far as they go. We accept them as the basis for action, and the test of action gives them a sort of pragmatic sanction. Intuitive common sense is likewise the daily and familiar guide of our ordinary thinking about the world. It leads us to our earliest knowledge and it takes the first steps toward further knowledge. In this more intellectual region, it behooves intuition to walk warily. It needs a clearer enlightenment and a more positive assurance before it declares its vision. Its conclusions will not be accepted without question as final and decisive. They must expect to be put into the crucible of philosophy and science and to be subjected to the acid tests of reason

and experiment. In spite of all this, however, they still have a tentative value as guides to thought and as necessary introductions to more precise study.

In the domain of the higher reason, no less than in that of common opinion, men must needs accept the initiative and follow the guidance of intuition. Philosophy must recognize its leadership and must largely rest upon its perceptions if it is to attain its own great intellectual ends. Intuition is a necessary and vital element in all philosophical thinking. Philosophical theories are not the unpurposed outcome of inevitable logical processes leading to unforeseen results. Before the philosopher can begin the elaboration of a new theory, at least the possibility of it must occur to him; it must even seem to him probable, or otherwise it would hardly be worth while for him to think about it. In a sense, he sees the end from the beginning, reaches his conclusion before he begins to think; and his thinking is an effort to examine and test and develop and establish that conclusion. A new idea suddenly dawns upon him, carrying with it a conviction of its probable truth. He does not know whence it came, but he is impressed with a sense of having made a new discovery.

When such an experience comes to him, it almost seems as though the philosopher were moved by an inspiration. He has had something like a revelation, a sudden enlightenment, an unexpected and unexplainable vision of new truth. It may not yet be full-orbed, may indeed be only in the germ; but it is the beginning and the substance of his theory. Such a process clearly in-

volves intuition. Then comes the testing, to see whether this intuition is really a true insight or merely a passing fancy. If it stands the test, then comes the laborious development and the elaboration of details. As this process of deliberate thinking goes on, the thinker may find himself every now and then brought to a standstill. Some important point may be obscure or he may not be able to see his way further. Then there is need of a new flash of light, a new intuition. Otherwise he cannot go forward. So theory springs from intuition, revealing itself to the philosopher's mind long before he has thought it through or marshalled the reasons in its support. So intuition aids the further development of theory, lending its aid where logic fails and reason falters.

It should not be left unsaid that there is a wide difference between the intuition of the philosopher and the intuition of the common man—as wide, perhaps, as between the thought of the philosopher and the thought of the common man. Yet, in both cases, the essential nature of thought is the same, and likewise the essential nature of intuition is the same. The special difference to be noted is that the intuition of the common man is naïve while the intuition of the philosopher is highly enlightened and intellectual. In the first place, the philosopher's intuition is based on wide and deep knowledge. He knows his own subject and many other subjects. He knows the ideas and the theories and the systems of other philosophers. He knows the limitations and the possible errors of common thinking and

common intuition. Then the philosopher's intuition is based upon much previous thought. He is familiar with the region of thought in which the intuition occurs. It is more than likely that his mind has been specially prepared for the intuition by some particular line of study or has come upon it as the solution of some problem long pondered. It is from such sources as these that philosophical intuitions are most likely to spring. Still further, the intuition of the philosopher is based upon intellectual endowments of an exceptional quality and upon highly trained intellectual powers. Only adequate mind engenders intuitions of the philosophical order.

For these and other reasons, the philosopher is prepared to make intuitions which are utterly beyond the capacity of the ordinary mind, and likewise, it may be added, to avoid many futile intuitions by which the ordinary mind might easily be led astray. The intuitions of the philosopher arise in the region of abstract and profound thinking. They are intuitions on the level of the finest thought and the widest knowledge, intuitions made in full awareness of other theories and speculations and in the full light of the best that has been known and thought in the world. Yet, however far his intuitions may rise above the levels of ordinary thinking, the significant fact is that the philosopher does make intuitions and that they are as necessary to his higher thought as they are to the lower thought of the common man. They do not differ in kind. They are simply more enlightened and more intellectual.

What about science? Cannot it get along without intuition? No; quite the contrary. This may seem like a strange answer, but it is none the less true. We are accustomed to think of science as being concerned simply with facts, but that is very far from being the case. If facts were its sole or its chief interest, science would be a mere accumulation of information and not an organized system of knowledge. Science is much more interested in laws than it is in facts. It is interested chiefly in the large generalizations which can be made from facts, and the facts are of interest mainly as the basis and the means for such generalizations. Science does emphasize facts, because it is unwilling that any generalization shall be made which does not have that basis. Considering the region of knowledge which science is exploring, no other attitude would be reasonable or sufficient. So science gathers its facts and carefully tests them; then, when it has enough of them, it makes its generalization.

Here is the point at which science begins to need the help of intuition. The need is, indeed, so great that science has its own special form of intuition. It is called the hypothesis. A scientific hypothesis is a tentative conjecture used provisionally to explain known facts but subject to revision in the light of new facts or reasonings. Now, such a hypothesis is essentially an intuition. The scientist makes his guess at truth, and then endeavors to prove it or to disprove it. Schopenhauer says that "the object of science is a universal which contains many particulars." It is a saying not

only true but very illuminating and suggestive. It helps to illustrate and to emphasize the function of intuition in its relation to science.

While science is gathering and examining the particulars, it may have little if any need of intuition. When it reaches out for the universal meanings of its facts, intuition is its necessary guide. That alone can first leap the gap between the particular and the general, can first give the flash of intellectual light which reveals some probable explanation or solution. Science cannot be wholly impersonal. In its high moments, it becomes intensely personal. It needs the personal intuition of scientific genius, sweeping the eye over the vast accumulation of relevant facts and then seeing the truth of a great meaning slowly dawn like light out of chaos. Instruments may reveal facts with more than human power and measure them with more than human accuracy; but only mind can discover meaning.

Scientific intuition is of course enlightened intuition. The scientist knows many facts of nature both within and beyond his own particular science. He is acquainted with the general laws of nature and with many scientific theories. His mind is prepared for adequate appreciation of scientific phenomena and principles. Only a mind with the scientific background and with the scientific attitude is capable of real intuition on the level of science. It is to be further noted that the scientist is trained to keen and accurate observation and to skillful and resourceful experiment. This gives him a ready means of putting things to the test and

an instinctive feeling as to what new ideas are likely to stand the test. Moreover, the scientific temper makes him extremely critical of new theories. He is likely, therefore, to avoid or sharply to challenge intuitions which may turn out to be mere guesses or fancies and to welcome only such intuitions as bear on their front the appearance of truth. When true illumination comes, he is likely to recognize it for what it is.

From all this, it would appear that there is such a thing as the immediate perception of truth, whether in the field of common sense or of philosophy or of science. There is also the immediate perception of beauty. Here it will surely seem very natural and appropriate to speak of intuition. In the appreciation of beauty, intuition is not merely the momentary gleam which illuminates some further process, like the development of thought or the acquisition of knowledge; it is practically the whole experience. We are here beyond all formal processes and are concerned with a certain kind of feeling which arises spontaneously whenever we recognize the presence of beauty. It is an intuitive feeling based upon an intuitive recognition. We have the feeling because we recognize the beauty; we recognize the beauty because we have the feeling. Feeling and recognition mutually support each other and are united in one intuitive perception. One might say that the intuition of æsthetic taste is in a certain sense self-enlightened. Genuine feeling for beauty often seems to be native and uninstructed. On the other hand, the sense of beauty is often a blind spot, even

in minds that are otherwise highly trained and developed. Where it is lacking, it cannot be supplied by any amount of effort any more than the power of thought can be acquired by the feeble-minded.

One of the most obvious modes of intuition is what we call genius. There would probably be general agreement on the idea that genius involves a high degree of intellectual power and that it is an inborn gift. This would seem to imply that it is independent of any teaching or training or education. To a certain extent, this is true, but it is not wholly true. Genius is capable of development, of learning from example and precept and experience, of improvement by exercise. It is strengthened by knowledge and enlarged by thought. We may be content with noticing two manifestations which are most characteristic of genius and which probably represent its distinctive nature. On the one hand, genius has in a high degree the power of insight. What lies on the surface, it sees with special clearness, but it also sees what lies beneath the surface; it penetrates into the heart of things. It has in this sense a genuine power of discovery. On the other hand, genius is creative. It conceives and builds new structures. In both of these manifestations, genius is an intensification and an exaltation of common human powers. The genius is not so much the man of exceptional faculties as he is the man of higher faculties; he is the common man raised to a higher power. The great instrument of genius is imagination. This is true in all cases, but it is especially evident where genius is

engaged in the work of creation. Nowhere is it more evident that genius is a form of intuition. Its great impulse and purpose in creation is to embody ideas in concrete form, to make things the symbols of thoughts. It impresses on things the organizing power of mind.

The intuition which belongs to artistic genius stands by itself. It is most nearly akin to the intuition of æsthetic taste, because it is in part an intuition of beauty. They are related to each other as creation is related to appreciation. When philosophy and science rise to the level of genius, it is the genius of insight, of penetration, of discovery, rather than the genius of creation. This of course involves different modes of intuition. The intuition of philosophy and science perceives truth; the intuition of art perceives rather the spiritual significance of truth. As distinguished from the method of science, the method of art is the method of personal vision. This is so when it seeks truth as well as when it seeks beauty. It is personal in the vision of insight as well as in the vision of creation. Personal vision is the inborn gift without which the poet would not be a poet.

Another respect in which the intuition of art differs from the intuition of science is indirectly suggested by the saying of Schopenhauer that "the object of science is a universal which contains many particulars," while "the object of art is a particular which contains a universal." When the scientist seeks truth, he broods upon his facts until his intuitive insight discloses to him the general principle which explains them. When

the poet seeks creation, he broods upon his bodiless thought and waits for his moment of inspiration. Then comes the sudden vision in which he sees the thought take shape and clothe itself with a body of flesh. Intuition has revealed to him as by a flash of inner light the symbol which fittingly incarnates his idea. He makes the vision stand until he can actually shape forth its image in the materials of his chosen art and thus make it visible to the eye or audible to the ear. The secret of great art is not the skill with which marble can be chiselled or paint spread upon canvas or words linked together or sounds molded into harmony; it is the greatness of the idea to be expressed, the greatness of the vision to be embodied.

Have we a right to speak of intuition in connection with our sense of moral law? That depends in large measure on just what we are talking about. We may have in mind morality as an expressed or implied system of conventional rules and prescriptions. As to the basis of morality in that sense, there are various views. Some regard it as based on social habits and manners and usages. There is, on this theory, no need of intuition. Some regard morality as based on a divine revelation. There is intuition here, but it is an intuition with reference to the revelation and not with reference to the morality itself. The moral rules and principles involved can be understood without intuition. Further, we may have in mind, not morality as a principle or a system, but simply moral conduct. Here also it would seem that we can judge our conduct and measure it by

accepted moral standards without any help from intuition.

What shall we say when we come to speak of conscience? That again depends on our conception. Conscience is usually regarded as a special faculty which enables us to judge whether our conduct is right or wrong, and the supposition is that it is infallible in its decisions and supreme in its authority. The common feeling is that conscience is a mystic and intuitive power. Not in that sense. In what respect does judgment of moral quality differ from any other judgment? There is a sense, however, in which conscience may be regarded as an independent spiritual power and as really intuitive. It may be understood as the instinctive feeling that there is rightness and wrongness, the instinctive feeling of obligation to be right and not wrong, the instinctive feeling of approval or disapproval which follows what the judgment declares to be good conduct or bad. In a word, conscience is the sense of oughtness.

In this meaning of the term, conscience is a powerful witness to the existence of the moral law. If its nature be fully appreciated, it can hardly be accounted for as springing merely from social habit and custom. The most reasonable explanation is that it springs from the fact that this is a moral universe. Men have a deep-rooted conviction that there is indeed a moral principle at the heart of things. It is such a conviction that we have in mind in suggesting that our sense of moral law rests upon a profound intuition. Men may

disagree as to particular acts of conduct and as to particular moral systems; but they are practically at one in the intuitive feeling that there is law, that it is fundamentally moral, and that all men have the duty of obedience. Moreover, there is an intuitive sense of a power in the world which somehow tends to enforce that law. Matthew Arnold spoke of this power as "*the not ourselves* which makes for righteousness." Call it that or God or moral law or whatever else we will, there is instinctive recognition of its real existence.

There is practical recognition of this moral law and this moral power even when there is theoretical denial. It is not a matter of reason but of intuition. Nor does reason or scientific investigation or human experience really tend in any way to set it aside. It rests upon its own assurance, and it stands all the tests that have so far been applied to it. Experience in particular tends every day to confirm it. In the conduct of personal life, it has a ruling force, and even the hypocrite pays it unconscious tribute. In social life, it is the basis of all human law and government and union and obligation. It binds nations and races as well as individual men. It holds all human societies together. Above all, it is one of the great fundamental elements in all religions. To the moral law are especially applicable the noble words of Richard Hooker: "Of law, there can be no less acknowledged than that her seat is the bosom of God, her voice the harmony of the world."

In his searching of the world, man starts on the level of practical experience and walks by the light of

common sense. He passes to the level of intellectual understanding and walks by the light of thought and knowledge. He passes to the level of æsthetic appreciation and creation and walks by the light of taste or of genius. He passes to the level of character and of duty and walks by the light of conscience and moral conviction. On each of these levels, he finds that intuition must give the original impulse for each new beginning and for each new direction. He passes also to the level of spiritual apprehension. Here he finds that intuition is not only the sole original guide but practically the only means to the desired end. On this level, attention may first be turned toward the fact of spiritual insight. Be it understood that there is here no special reference to religion or to belief in supernatural being. These may be incidentally involved or implied, but they are not the main consideration. We have reference rather to the discerning of spiritual quality and the perception of spiritual values on the purely human level and within the ordinary bounds of human nature and human experience. Within those limits, there is surely something to be perceived and just as surely a power to perceive it.

Spiritual insight is almost another name for spiritual intuition. It is the power by which we have direct and immediate knowledge and appreciation of spiritual quality and spiritual value. Material reality is felt by the senses; the two are of the same nature and can touch each other. Spiritual reality is discerned by spirit; these two are also of the same quality and can

touch each other. Spiritual insight is a sort of spiritual sense. Natural objects are seen by the physical eye; spiritual objects are perceived by the mind's eye. Spiritual insight is spiritual vision. This power is not a rare one, at least in its lower and commoner forms. The very fact that we speak so often of character and of personality shows that we have an eye, so to say, for spiritual quality in men and women. Character and personality involve other things besides spirituality, but they do very largely include that. We appreciate and admire courage and determination and love and devotion and aspiration and a score of other qualities of a spiritual nature. We appreciate their opposites and are repelled by them. Men have conceived no higher ideal than "the beauty of holiness." Our admiration and dislike have themselves a spiritual quality. Our appreciation is largely dependent upon the presence of spiritual quality in ourselves. Spiritual things are "spiritually discerned." "Blessed are the pure in heart; for they shall see God."

Spiritual insight is likely to be one of the particular gifts of great genius, and here it may rise to a high degree of strength and refinement. It is spiritual insight that perceives beauty and finds the way to evoke beauty, that perceives the subtle analogies between material things and spiritual, that discovers the significant relation which makes it possible for the object to become the symbol of the idea. Music and poetry are especially empowered to discover and to convey the influences which emanate from spiritual being. Perhaps

there could be no better illustration of the power of spiritual appreciation and conception than Dante's *Divine Comedy*; but even the more mundane poets—Homer or Shakespeare, for instance—are full of spiritual suggestion in the broader sense. They are almost sure to be if they have sufficient genius. This power of spiritual insight is likewise a particular gift of all highly sensitive and highly refined spiritual natures. Theirs especially is the power to recognize and appreciate spiritual quality in other human souls, for it is something kindred with themselves. Thought discerns thought, knowledge discerns knowledge, mind discerns mind. So likewise, character discerns character, personality discerns personality, spirit discerns spirit. Spirituality is also wisdom.

This brings us to faith. By its very nature, faith is an intuition. It is a felt assurance beyond the evidence of experience or knowledge or reason. It is an intuitive belief in supernatural reality. The Scriptural definition is full of significance. In the Authorized Version, it reads: "Faith is the assurance of things hoped for, the proving of things not seen." That is to say, it is a feeling of assurance that the things hoped for—or believed in—are really true; and it is further a test of whether they are true or not—the very fact that we find it possible to believe in them tends to vouch for their reality. In this spiritual region, faith is our only resource. If we are not to stop short, we must make use of it. If we are not to make use of it, the only real alternative is agnosticism; for denial of spiritual reality

is a kind of negative faith, an assurance that things are not so. Pure agnosticism is practically an impossible attitude. It cannot be strictly maintained. All men believe something, whether they realize it or not.

Faith is a natural and serious human power, perhaps the greatest of all human powers. It should not be thought of as opposed to reason or apart from reason. It is a power meant to carry us further when reason is forced to leave off. So long as we can know, we have no right to appeal to faith. When we cannot know or reason any further, then the light of faith may legitimately be used to help us pierce the darkness. We are simply asking, What can I believe beyond this limit of knowledge? Faith is man's great conjecture as to the unknown, not his foolish determination to believe something in spite of knowledge. When it goes on alone, it should go on in the direction which knowledge and reason were following when they had to stop. It should keep touch with them and be willing always to hear their admonitory voice. Faith thus understood and thus used is a real discoverer of truth. It is human nature gathering all its powers, standing on tiptoe, stretching upward, taking wings for flight into the unknown darkness.

Like any other intuition, faith is limited to its own field and is valid only so far as it can hold its own and carry conviction in comparison with other human powers. It has no claim to a complete right of way. It is subject to whatever tests may be really appropriate in any particular case. Inasmuch as it moves in a region

where other powers find it difficult to go without undue presumption, it has in fact a large measure of freedom. It can be properly challenged only on good grounds drawn from human experience or knowledge or reason. Until those can make good their challenge, it has a right to trust its own intuitive perception. On the other hand, it can hardly expect to receive much support or confirmation from them, because they are for the most part concerned with other things and do not profess to be competent judges in the realm of the supernatural.

Perhaps its best evidence is that which comes from its own strong self-assurance, from its positive conviction that it has really seen and heard. Another sort of confirmation arises from the fact that faith has a natural reaction on life. If a man's life appears to be elevated and refined by the faith which he holds, that fact tends to create a presumption that the things which he believes are true things as well as high things. If truth is what works well, his faith has received a pragmatic sanction. It has also a Scriptural sanction, for it illustrates the principle that a man's faith is justified by his works. The further suggestion may be made that faith also receives confirmation from the opinion and practice of mankind. In all ages, men have felt the irresistible impulse to believe in the unseen. They have found it necessary to life, and they have found it verified by life.

Here again we are confronted by mysticism. We cannot ignore the presence in the world of men and women who make serious claim to have had intimate

communion with the supernatural, immediate vision of truth, direct knowledge of ultimate reality, close touch with divine being. This is mysticism in the strict and true sense. This is what St. Paul means when he speaks of being "caught up to the third heaven"—"Whether in the body, or out of the body, I cannot tell." This is the inner light of the Quaker, the passive contemplation of the Quietist, the abstraction and absorption of the Hindu Yogi. It is the way of the prophets and the saints. Mysticism in this inward sense is of course based on intuition. Indeed intuition is here carried to its utmost limits. It is hard to tell what we should think of this sort of mysticism. We can hardly dismiss it as the product of morbid or supersensitive natures. Yet its manifestations are so far beyond any experience of the ordinary man that he is not able to appreciate them or competent to judge them. This may be simply another way of saying that his consciousness is not yet sufficiently developed. So far as the ordinary man may presume to judge, mysticism seems to carry its doctrines and its claims to a superhuman extreme. It seems to have turned its back on practical experience and logical reason and positive knowledge and to have exalted intuition and meditation to a place of exclusive authority.

This general survey of various modes of intuition has aimed to show its range and to illustrate its power. Above all, it has aimed to make good the claim that intuition is the guiding light in the pursuit of all human knowledge. In the course of the discussion, it has appeared that intuition is not some strange and mystical

human power, but a power as natural and as normal and as familiar as any other. When it comes to mystical regions, it is capable of performing mystical functions; but in the ordinary way of the world's business, its functions are those of a ready and capable servant of human needs. It coöperates naturally and readily with other powers and does not ordinarily tend to usurp their place. It throws the needed flash of light upon the problem or the situation and then leaves to the other powers their proper task of digging out, or of bridging over, or of building up. Its own particular tasks are many and varied, but they all have the same essential character. They have to do with making the guess, with showing the way, with unfolding the hidden, with seeing truth not as something demonstrated but as something known because it is seen and felt. In such a capacity, it serves the common man in his endeavor to understand the world in which he lives and it serves the mystic in his effort to commune with spiritual truth face to face.

CHAPTER XII

CHECKS AND BALANCES

INTUITION is associated with the beginning of our knowledge, with the casual or the systematic extension of our knowledge within the bounds of space and time, with the indefinite expansion of our knowledge into the spaceless and timeless region of the spirit. At each stage of the exploring process, it gives the first hint of new directions to be taken, of new discoveries to be made. It is like the divining rod in the hands of the searcher after water or hidden treasure, like the light in the binnacle which enables the mariner to read his compass and steer his ship, like a far-seeing companion to a short-sighted traveler. We must come now to speak of certain limitations and dangers of intuition and especially of the way in which its peculiar activities need to be checked and balanced by other human powers.

Intuition sometimes tends to be overconfident. It naturally has a strong belief in the accuracy of its own vision, in the sureness of its guesses at truth; and therefore it not seldom mistakes certitude for certainty. Perhaps we should say rather that man is likely to have too much confidence in himself. He is too sure of all

his powers. He has an undue confidence in what he sees with his eye or hears with his ear or thinks with his mind. Of course man must trust his powers—that is what they are for—and must expect to take some chances of error. In the long run, he finds that his trust is justified. Evils arising from overconfidence tend sooner or later to correct themselves or to be corrected by the natural balancing of the various powers against each other. Still, man must meanwhile suffer certain temporary disadvantages. In the case of overconfidence in his intuition, he is often led to shut his eyes to the light of new thought or knowledge and to cherish blindly some outworn illusion or superstition. Sometimes he clings stubbornly to a personal prepossession in the face of all common sense or reason. There are still people who believe that the earth is a flat disk and that they can go and look over the edge. That was once a fairly good intuition, but it has been proved wrong. It is no longer of any use and simply shows that intuition may be too conservative as well as too bold.

Such attitudes as these are unfortunate. They often indicate something more than overconfidence in intuition. They indicate a disposition to substitute intuition for common sense and knowledge and thought, to act in all matters by intuitive impulse instead of taking the pains to examine things and think them through. This is essentially a childish attitude, not worthy of grown men and women. Men have intuition and must use it; but they must understand its proper nature and use it

only in its proper relations. Intuition does not stand alone. It has no exclusive rights. It has its own rightful place and its own special function, and these no other power can usurp. The other powers have also their places and functions, and these intuition is bound to respect.

Still another unfortunate tendency of intuition is to outrun the other powers and leave them behind. It does so, not from any particular wish to disregard them, but simply by the quick spontaneous impulse of its own nature. It is, so to say, impatient at their slowness and eager to hurry on. It is best for intuition to keep in touch with other powers so far as may be possible. They may help to save it from aberration or vagary, may help to make its vision clearer and saner. It should not allow itself to contradict reason or common sense or known fact. Human nature refuses to be thus divided against itself. It will allow intuition to transcend reason but not to annul reason. Intuition may sometimes have to go where reason cannot follow. Yet, however high it may be able to soar, it cannot altogether escape the law of gravitation. It must come back to earth again. Its home is with men, and for them is its service. It has no prerogative to violate the principles of thought, or of knowledge, or of taste, or of common sense. So far as it does so, it defeats itself. In any given field of thought or action, all the human powers that can perform service there are bound to work together in harmony. Only so can they all work for the common good.

Intuition is limited as regards its proper sphere of

action and has very little force and effect beyond that sphere. Not only so, but it is limited even within its own sphere. This is simply to say that it is not a perfect or an infallible or an exclusive power. There is sometimes a tacit assumption that reason or judgment or observation or perception or sensation may err, but that intuition—especially when it speaks in positive and definite terms—is always right. This is very far from being true. When intuition acts outside of its proper sphere or without due regard to other considerations, it is more than likely to be mistaken. When it is guided by mere impulse or whim or prejudice or passion—as it sometimes may be—its testimony is of little value. Sometimes it is scarcely more than a mere notion. When, however, intuition acts seriously and earnestly, sees vividly and profoundly, speaks with firm conviction and assurance, it is likely to give us real revelation.

The value of intuition is by no means always in direct proportion to the clearness and definiteness of its vision. Indeed, there would be some truth in the view that it is not seldom in inverse proportion to these. It performs its most useful and most characteristic service when it penetrates for the first time into regions hitherto unknown, and here the first vision is likely to be vague and uncertain. Then, too, its function is not to define or to analyze or to specify but to reveal. What it reveals can be better demonstrated and defined by other powers. When it attempts to determine facts past or to verify facts present or to predict facts future, it is outside of its proper sphere. Its true region is not that

of specific fact but that of idea. It is a faculty of vision, but what it really sees is not fact but truth, or presumed truth. Truth does not always appear in clear outline and with rocklike solidity. Sometimes, however, the vision is not truth but illusion, clear enough, it may be, but not a vision of reality. It is to the mind what a mirage is to the natural eye, and the sooner it can be recognized as such, the better. It is important, therefore, that we should recognize the ever-present possibility of illusion and should guard against it by insisting that intuition be brought to the test of comparison with other powers. They may be able to show at once that the vision is mirage instead of reality.

Where the testimony of intuition and of other powers is conflicting and there seems to be no way of deciding between rival claims, it is the part of wisdom not to discredit the one side or the other in arbitrary fashion, but to hold the matter in suspense and search for further light. In the meantime, we may frankly recognize that the relative value of testimony depends not alone upon the comparative merits of the particular powers which are being brought into question but also in large measure upon the field of human experience where the particular case is being tried.

On the level of practical life or of philosophy or of science, intuition is a "guide, philosopher and friend" whose voice should be heard with respectful attention but whose utterance is not the last or the determining word. On the level of art or of morals, intuition has a wider authority. When the philosopher attempts to

speculate about imagination or about beauty, he cannot safely ignore the intuitions of the poet or the artist. When the scientist proposes to give us a new code of ethics, he would do well to reckon not only with scientific data but also with the moral sense of mankind. When we come to the level of spiritual insight or of faith, intuition has always the first word and not seldom the last. Even here, it should give respectful heed to other voices; but it is on its own peculiar ground and may rightfully claim to speak with a high degree of assurance and authority.

Intuition is largely regulated by experience. That is one of the sources from which it springs and from which it continues to receive new stimulus and suggestion. It is regulated by the experience of the individual self and also by the general experience of mankind, by experience concerning the outer world and experience concerning the inner life. Intuition is not likely to declare anything which its own past experience or that of other men has come to regard as doubtful or false. Later experience—its own or that of others—is the great common test by which all its conclusions must be tried. From that scrutiny, it cannot hope to escape, for the light of experience is a light common to all men—a light of common day which dissipates the fanciful dreams of the night. Unless it can justify itself in the court of experience, intuition must stand condemned, for in many ways and in regard to many things, human experience is a court of last resort.

Intuition is also largely controlled by observation. What men have actually observed is convincing to their minds. If intuition declares anything contrary to that, it is likely to be rejected unless it can bring strong evidence in its support. This, of course, is true even in the case of ordinary observation. There is, however, a scientific observation which is rigid and strict and which therefore has a higher degree of accuracy and authority. It includes careful and controlled experiment. If intuition contradicts such observation in any matters of fact or of positive knowledge, its chances of being right are small to the vanishing point. To deny evolution, for instance, because it is not to be found in the Bible or because it seems to conflict with popular conceptions of religion is to make faith contradict knowledge and to arrive at a "lame and impotent conclusion." Faith, or any other intuition, when it comes within the sphere of knowledge based on accurate observation, must undergo the scrutiny to which all supposed knowledge is there subjected.

Still further, intuition is largely controlled by reason. That is the highest form of human control. To the scrutiny and the criticism of reason, everything else is subject. That is not by any means to say that reason is always supreme, much less that it is always right. It is simply to suggest that reason is at least an *amicus curiae* in every court of judgment and has a right to speak its admonitory word. If intuition declares anything which seems to contradict reason, it is so far open to the objection and the criticism of reason. Un-

less it can fairly maintain its ground against that criticism, its position is shaken and may be entirely destroyed. In all matters of ordinary human judgment, the decision of reason is almost bound to prevail. Even in spiritual matters, reason has a right to speak, for it is itself of the spirit. In this region, however, its authority is somewhat less assured. Intuition may here speak at least on even terms with reason, but it cannot in any case safely neglect to hear and to ponder what reason has to say. It may find in the voice of reason the very inspiration which it needs. When reason is on its own chosen ground—the ground of philosophy and science—intuition must make terms with it or must be prepared to meet its dangerous challenge. Here reason is practically invincible.

It ought not to be taken for granted that the criticism of experience or observation or reason will always be destructive or hostile to intuition. That is very far from true. Sometimes such criticism tends merely to correct or to modify; sometimes it tends to confirm. On the whole, it tends to strengthen the position of a sane and conservative intuition as a natural and normal human power whose testimony is worthy of respectful attention. In the long run, intuition is justified by its works and by the judgment of its peers. If it were not so, we could have comparatively little confidence in its pronouncements. Intuition cannot stand alone, except perhaps to some extent in the higher spiritual regions. On the other hand, if intuition could not be trusted, the other powers would be left without the suggestion

and the inspiration which may come from its immediate vision.

Intuition, then, is more or less influenced and controlled by experience and by observation and by reason, and its utterances are likely to be judged largely in accordance with their approval or disapproval. It is desirable not only to appreciate this as a general principle but also to notice examples and illustrations of some of the particular ways in which this control may be exercised or in which the approval or disapproval may be shown. This purpose can best be served in connection with the purpose to observe the practical working of intuition, to see it, as it were, in action. To show intuition in its full range of action would be an immense undertaking. We may be content, however, with something less—much less—than that. Our object is to illustrate the actual working of intuition and incidentally to notice the ways in which it is confirmed or corrected or discredited by other powers. It will serve that end well enough if we may dip here and there into the main stream and take a cupful for the river. Knowledge, after all, is one, however manifold may be its forms; and likewise intuition is one, however varied may be its activities.

As we have previously assumed, all human knowledge begins with the intuition of awareness. It is futile to bring such an intuition as that before the bar of ordinary human judgment, as though its fate depended upon the decision. It must be so. Here intuition must be allowed to pass without challenge, for challenge

would be a confession. If it is, the consequences are very great. It seems a small thing—a commonplace and a truism—to accept as truth the intuition that we are aware; but it is the beginning of all truth, the foundation of all knowledge. For one thing, it is an intuition of spirit, for awareness is a spiritual and not a material fact. If it is accepted by the reason, much has been granted. Especially it has been acknowledged that intuition is the “only begetter” of original truth, that spiritual being really exists, and that it alone is capable of beginning to know. That is a supreme triumph of intuition. If it can do as much as that without the aid or consent of any other powers, we may well be respectful of its claims when it assumes to guide us further in the pursuit of truth.

Intuition, of course, does profess to guide us very much further within this same spiritual region. It declares to us in unmistakable terms that knowledge is possible, that experience is possible. It speaks confidently of the self and self-consciousness, of the many spiritual powers which the self can exercise, of a unity binding all these elements together into an individual entity. It speaks with almost equal assurance of thought, of individuality, of personality, of character, of mind, of soul. In all these far-extended claims, it does not of course go unchallenged. Its original assertion of awareness must perforce be allowed to pass; but when it goes on to assert all the qualities and attributes that are involved in soul, it meets with many objections and denials. But, when its original claim has

once been granted, the main position has really been surrendered. On points of detail, it may be successfully gainsaid, but it has won a vantage ground from which it cannot easily be dislodged. Intuition must be right also in its perception of the general fact of otherness, of a world over against the soul but in some way related with it. This other world may be independent being or it may be a vision created by the soul itself; in either case, it is something there, a not-self which complements and fulfills the self. However intuition may be challenged on this its own chosen ground, the great probability, the moral certainty, is that it cannot be confuted or materially shaken.

Here again, intuition is the only competent witness. The experience and the common sense of mankind are on its side. Ordinary men may not stop to think much about the matter; but unconsciously and instinctively they act as though they believed that they had souls. So also do intellectual men, even the skeptical philosopher and the materialistic scientist. In every act of their daily lives, they are constantly assuming what they theoretically deny. Even in the actual work of philosophical thinking or of scientific investigation, the same silent assumption is made. Here, then, we may fairly say that the intuition which asserts the soul receives ample though unconscious verification. Intellectually, we may continue to hold the matter in abeyance, awaiting the light of further evidence or of further thought. Practically, we do not make even that reservation. We instinctively feel that there are within us

those powers and attributes which we have in mind when we speak of soul, and quite as instinctively we act upon that feeling. Human life and thought, therefore, in their myriad forms, are a constant verification of this great spiritual intuition.

When the soul steps beyond itself, so to say, and proceeds to inquire concerning the external world, it at once begins, in that region also, to exercise its faculty of intuition. Its first conviction is that such a world exists. This is an intuition almost as sure as the soul's intuition of itself. It is approved, in one form or another, by philosophy and science, by experience and observation and reason, by the common judgment and by the daily practice of mankind. There is substantial agreement from all quarters until men wish to proceed further and come to ask what may be the nature of that world which is not the soul. Here the ways begin to divide and wide difference of opinion arises. Intuition again takes the lead, and the differences of opinion are due to the fact that there are a number of conflicting intuitions. This divergence finds its best illustration in the various schools of philosophy. The idealistic philosopher finds the basis of his system of thought in the intuition that the world is essentially idea and not matter. He may hold that the universe exists only in the mind, that there is no objective reality. He may hold simply that we can know only the ideas of things. This allows an objective reality to the world but holds that that reality is unknowable. The materialistic philosopher, on the other hand, begins with the intui-

tion that reality is essentially material. He holds that it is also knowable. Between these two extremes, the dualistic philosopher has still another intuition—that the world is both idea and thing, both mind and matter. He believes that there are two realities, the material and the spiritual.

It may at first thought seem strange that intuitions—and especially such fundamental intuitions—could be so far at variance with each other. It is not, however, at all abnormal that intuitions should conflict, any more than it is abnormal that observations or ideas should thus conflict. Intuition is a part of human nature, and such difference is quite in accordance with human nature as we know it. Such variation is also what we might naturally be led to expect by the principle of relativity. Different minds see things on different levels and from different points of view. As to which of these intuitions may prove to be right, we must await the light of further experience and fuller knowledge and deeper insight. It is not impossible that in some sense they are all true—that there is some deeper and as yet unknown ground for reconciliation. The view that we can know only the ideas of things is not inconsistent with the view that there may be real things. The apparently conflicting views, that mind is the only reality, or that matter is the only reality, or that mind and matter are two realities, may yet be harmonized by knowledge of some ultimate reality underlying them both.

In framing general theories about the world and

about the nature of reality, the human mind rests largely upon intuition and tends to justify the use of intuition. Man is not content, however, to stop at this point. He also feels the strong impulse to enrich himself with more detailed knowledge of the multitudinous phenomena which go to make up nature and life. The typical activity in this field of accurate and comprehensive knowledge is that of science. By its very nature, science represents man's endeavor to know and to organize knowledge concerning the material world. The daily labor of science is the accumulation of facts. It is a toilsome and patient labor, requiring skill and experience. It requires discrimination also, for science does not care much for mere facts, but only for significant facts. The gathering of facts must be followed by a very careful testing of facts. Science is extremely accurate in its observations and wonderfully ingenious in devising instruments and experiments for the extending and the proving of its knowledge. Scientific method still further increases its efficiency and its reliability by involving the coöperation of many individual workers in the pursuit of a common end. This gives it the advantage of united effort and also of critical comparison. It enables it, so far as is humanly possible, to eliminate error and to be impersonal and objective in its conclusions.

In the application of these characteristic methods, science may confidently rely upon its own wonderful resources. It must go further than this, however, if it is to accomplish its real purpose, and then comes the

critical point. Meaning implies mind, and here arises the imperative call for great intelligence as well as for great industry and ingenuity and skill and knowledge. When mind begins to work, its first impulse is toward an intuition. It must have that before it can begin to reason about new things. There must be some intuitive conjecture as to a probable explanation or solution before it can determine the direction and plan the procedure and devise the means for finding the desired interpretation. There must be a provisional guess at a meaning before there can be much progress toward finding and establishing a meaning. There must be an intuition.

It is obvious that a first scientific intuition may be wrong or may need much modification. In such case, the scientist must guess again and perhaps many times again until his mind sees something which really proves, on closer examination, to be the truth which is sought. The history of science affords plenty of illustration. For a typical instance, certain conclusions based on the intuitions of Sir Isaac Newton have stood firm for over two hundred years and have served well the uses of science; but they now need to be revised in the light of new conclusions based on intuitions of Einstein. It is interesting to note, however, that they do not have to be entirely discarded. This shows that intuitions do not have to be infallible or complete in order to be serviceable. Probably most human intuitions are a mixture of truth and error. So far as they are true, the conclusions based upon them will at least have a sure

foundation. So far as they are erroneous, there will need to be revision. In that case, however, there can be no hopeful start toward a new theory except as there is first a new intuition. Sometimes the original intuition is right in its main principle but faulty as to some of its details. Sometimes wrong conclusions are drawn from right intuitions. In such cases, there is nothing to do but to seek and apply the necessary correctives.

Something like this seems to be true in the case of evolution. The main intuition of an evolutionary process as fundamental in the world is in all probability true. So far as present knowledge and thought can determine, the general doctrine seems likely to stand. Examination and study up to the present time seem only to confirm that impression. Evolution has received from science a practically unanimous acceptance and endorsement. Yet the doctrine has been changed and modified in the course of the years and will doubtless be much further modified in the years to come. This is not to say that the main idea is likely to be much modified. Its tremendous appeal to intelligence and its solid basis in fact make that altogether improbable. The modifications that have so far been made tend to confirm the main principle while they give us hope of a more complete and more nearly perfect conception. Science offers us no finer example of a great structure of knowledge built upon the foundation of a most profound and illuminating intuition. The sudden insight of mind which first caught the vision of a world of matter and life in orderly and progressive development

was nothing less than an inspiration. Without this great intuition, the modern scientific doctrine of evolution would have been impossible.

One of man's strongest impulses is to explore the earth on which he lives. He seeks with eager mind to discover whatever he may concerning its remote places and its hidden facts, concerning its material objects and its living creatures and its human beings. Sometimes his effort has practical ends in view; but quite as often it is a search for pure knowledge, as in the effort to reach the frozen poles. Here man combines the adventurous spirit with the curious mind. The discoverers and explorers of the world have provided the materials for some of the most vivid and inspiring pages of its history. They have added in no small measure to the world's store of useful and theoretical knowledge. They have made important contributions to natural science. Any illustration of the world's progressive development in knowledge would have to recognize the large and important part which they have played. It specially concerns us here that most of the great discoveries have not been made by accident. They have been made in large measure by men who foresaw at least something of what they would find and who went to find it. This means that they had studied the matter beforehand and had made up their minds as to the probabilities. This in turn means that they were prepared to make what might be called an intuition of successful discovery.

The great explorers of the world have been those

who have known how to make the great and good guess. They have followed their star, and their star has given them light and guidance. It is true enough, as Horace said long ago, that "oak and triple brass was around the breast of him who first trusted a fragile bark to the ruthless sea"; and it is true also that daring is a kind of intuition—an instinctive confidence that one can surmount danger and ride safe amid the stormiest waves. Yet something higher and more important than this, in the adventurous pursuit of knowledge, is the intuition of the mind which confidently believes that it will find what it seeks, or at least that it will find something which will reward the search. The explorer does not, of course, always find just what he seeks. Sometimes he dreams of a certain goal and then finds something very different from what he has dreamed but far better. That was the case with Columbus. He accepted the intuition that the earth was a sphere and that one could sail around it. He believed that he could find a passage to India, and he found not India but America. This did not really defeat or discredit his intuition. It was none the less a revealer and a genuine guide to new knowledge. His true intuition was that, if the world was really round, he would find something that was worth while and would come back home to tell of it. He did come home, and the new knowledge which he brought revolutionized the life and thought of the world much more than they would have been revolutionized by the discovery of a passage to India. He really succeeded in

verifying his own intuition and in making clear to other men that his voyage was worth infinitely more than it had cost.

Such considerations make clear the fact that intuition has had much to do with the development of human knowledge. It has also played an immense part in man's historic life. By the aid of intuition men come to know; they also live by the aid of intuition. Intuition is a guide to action as well as a guide to thought. There is nothing in man's historic life more evident than that he has been a dreamer of dreams and a realizer of dreams. Nothing has been historically more important than that. If we could take away from human history and civilization all that man has done and made "according to the pattern" which was shown to him "in the mount," we should take away most of what has really been worth while and practically all that is highest and best. Human progress is very largely due to the fact that man is instinctively a framer of ideals and that his ideals have had a potent influence upon his life. Ideals are intuitions. The best of them are man's intuitive visions of a desirable perfection. Some of them, of course, are foolish and others are impractical; but on the whole, there is no safer guide to life, as there is none that is more inspiring.

No one can fairly say that the intuitions which we call ideals have not justified themselves under the stern tests of human history. Ideals are the guides of life; but in order to guide it effectively, they must be realized. It is not fair to disapprove them until we have tried

them. The true test of their worth is in the endeavor to realize them. Before that test, the ideals that are foolish or impractical will fade away; those that are just and right will reveal their value in proportion as they grow in solidity. The more earnestly men strive to realize their ideals, the more they become convinced that ideals have a real sanction and authority. Some ideals, of course, are not meant to be realized. They are simply meant to shine in their own splendor and thus to inspire the souls of men. Such ideals are self-justified; they justify themselves by their own shining. They are like stars which we can never touch and can never bring down to the earthly level, but which nevertheless guide the mariner across lonely waters or thrill the poet's soul with their beauty.

Such ideals have power because they are fitted to the nature of man and because man is able to feel their influence. He can transmute their values into terms of human action or thought or aspiration. After five hundred years, the name of a French peasant girl is still able to stir the soul of France, and the memory of Joan of Arc is "fair as the moon, clear as the sun, and terrible as an army with banners." This is so because Joan of Arc is an embodied ideal. The instinct of man for thus incarnating his ideals in some chosen and beloved form is his instinct as an artist and a poet. By the artist and the poet in him, man knows that such an embodied ideal is more powerful—as it is more enduring—than any so-called reality. America is thus idealizing Abraham Lincoln. Those who insist that she should

look only at the real Lincoln are mistaken. What is really significant to her spirit is the ideal Lincoln. She has grasped the higher truth. She is not likely to forego it. All that is significant in the real is gathered up and purified in the ideal.

Religion is at once the highest and the most comprehensive activity of the human soul. It is man's touch with spiritual reality, but it also involves in a sense his touch with all other reality. It calls his spirit up to the highest plane, but it also calls upon all the powers of his nature which are above the merely animal level. Religion has to do with man's conduct; it prescribes for him a moral law and demands that he should act according to that law in his own inner life and in his relations with his fellows. It has to do likewise with man's emotional nature. Religion is very largely a matter of man's emotional response to the ideas and the ideals which it sets before him. Religion is also interested in thought. Theology is a form of philosophy, and every great religion has its philosophical side. Religion is interested in knowledge. Almost everything that men can know has a direct or an indirect bearing on religion. The relation between religion and science is a matter of vital concern to all religious thinking.

Religion is interested in all these things and many more, but it passes beyond them all to an interest in man's spiritual life and in his spiritual relations. It concerns itself with what can be known or thought or felt about the soul, about God, about spiritual reality, about the possibility of life after death. In these

spiritual regions, it exercises its own peculiar gift of religious faith. Where it does not pretend to know, it still ventures to believe. Where reason is compelled to acknowledge that it cannot fathom the deeps any further, religious faith presumes still to drop its line "deeper than did ever plummet sound." Faith, of course, is a form of intuition. It professes to see where other vision fails, to see often directly and face to face the unprovable and incomprehensible truth. Such a faculty can hardly be subjected to any decisive control or correction on the part of knowledge or reason. They may approve or disapprove, but faith claims to be beyond their jurisdiction. All that we can ask is that it should, so far as possible, strive to be in harmony with whatever is known and reasonably thought.

Is there, then, no test by which faith may be either condemned or justified? There is at least one. Faith has a natural and necessary reaction upon life. It may be fairly judged by the character of that reaction. If faith clearly results in righteous conduct, in generous feeling and in noble thought, it is so far justified by its works. If it tends to pollute the stream of life, it is thereby condemned. Of course, a good life does not necessarily prove that the things believed in are true. It does indicate, however, that the things believed in are worthy of being true. It must be a faith in good things which bids men think on "whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report." Beyond this test of its effect on life, faith must probably be left to its own recognizance to seek

the truth, the whole truth, and nothing but the truth. Provided that it is approved by its consequences in life, provided that it maintains a reasonable harmony with the best that men have been able to know and to think, it may be trusted to walk by its own light and to travel by its own road. If it is then able to win to a clear vision, to a deep conviction, to a firm assurance, it is self-justified.

So it comes to pass that the soul of man fulfills its indispensable function—beginning with a self-assured intuition of its own existence and nature and ending with a self-assured intuition of spiritual reality beyond the ken of any other power of human vision. In these spiritual regions, intuition is left largely to its own resources, with only such incidental support or confirmation as it may now and again be able to gather from other quarters. The territory which lies between these two extremes is the proper ground of human experience and knowledge. Intuition must be content to serve as the helpful light upon their darkling way. It does perform there an immense and necessary service, but it needs to be used with due caution and within proper limits. It needs also to be checked and balanced by comparison with other powers. In spite of all liability to error, it is found to be a safe and trustworthy guide of human life. In proper harmony with other powers, it helps to build up the great structure of human knowledge and thought. Where no other powers can go, it holds high the one light that can penetrate even a little way into the enveloping darkness.

CHAPTER XIII

WIDER HORIZONS

PROBABLY the most epoch-making event in the history of life was the first dawn of consciousness. Who can say how far back or how low down in the scale of being? Not before life, assuredly, for consciousness is a phenomenon of life. Not in the lowest stages of life, for we can hardly attribute consciousness to vegetable life. Not even with the lower forms of animal life, for much of this seems to be as automatic as the life of the plant. Somewhere, at any rate, in the long and slow process of animal evolution, consciousness begins. This somewhere is certainly below the human level, probably very far below it. If it coincides with any particular point in the evolution of the physical organism, it is probably with the first beginning of brain. Brain becomes more and more capable in the exercise of its function until it makes possible a further development of consciousness which is called self-consciousness. It is common to think of this as belonging exclusively to man, but we seem to observe more or less distinct evidences of it in the higher types of animals. Probably in them it is showing itself in the germ, while man alone is fully self-conscious. This higher development of consciousness is what gives his-

toric significance to the origin of consciousness and makes us realize how great an event it really was. We can see now that it was the beginning of a new element in the world. It was an event silent, invisible, spiritual. The world had, so to say, begun to turn upon itself and to contemplate itself.

Up to the time of the advent of consciousness into the world, there had been only the play of physical forces. Now matter had, in some way, begun to think or had at least entered upon the road which would eventually lead to thought. It had become spiritual. Either that or else spirit had entered into it from some unknown source. Before the event, nothing could have foreseen or predicted it; after the event, no one can account for it or explain it. Yet we know most assuredly—better than we know anything else—that it actually is. We are also dimly aware of powers and possibilities not as yet unfolded. If matter has evolved life and if life has evolved consciousness and if consciousness has evolved knowledge and thought, it seems a reasonable supposition that the end is not yet. That further stage of being eludes our conceptions and our definitions, but it does not altogether elude the experience of the rarest and finest human beings. It is as though life were already groping toward developments which are not yet made manifest.

It would be interesting—and probably highly instructive—if we could know how the world appears to a rudimentary consciousness. We should be able to judge better as to the extent and the nature of the devel-

opment of consciousness which has already taken place. If the animal could interpret the world and its own experience after the manner of a human philosopher, its philosophy of nature and of life, so to say, would be something very limited and very crude. It would pretty certainly be a materialist, interpreting all things in terms of physical sensation and mechanical reaction. It would probably have no conception of mind and soul as independent values. Its psychology would involve nothing higher than behavior. The world would appear like a machine or perhaps like another animal acting by the same instincts and impulses as itself. Man would seem like a very mysterious and incomprehensible animal, because many of his motives could not even be guessed. The animal would, of course, have no background of general knowledge but would be limited to his own experience and to the inferences to be drawn from these. There would be little power to look before and after, only a rudimentary memory and a rudimentary foresight.

If we could rise to a higher level of animal consciousness—say to the level of those animals which approach nearest to man—we should doubtless find that we had already traversed a great distance. The fact of the development of consciousness would press itself on us as a very obvious one. Animal consciousness has attained to a wider outlook, to a finer discrimination, to a clearer and more intelligent apprehension of the world. It is probably true that the higher animal has come a little nearer to reality as distinguished from

mere appearance. The animal, however, is not yet capable of making that distinction. So far as it can know, the world actually is what it appears to be. Without hesitation or question, it accepts every appearance as reality. It has not learned to doubt, for doubt implies the ability to reason and to imagine beyond the apparent fact. At the stage of consciousness which it has reached, sensation and response are still the limit of experience. Yet the world, as understood on this higher animal level, must be something very different from what the lower animal could possibly conceive. Experience, even if its limits be much the same, is probably much more definite and much more clearly perceived. If an animal on this level could interpret and rationalize its experience, many more conceptions would come into view and the total picture would seem to us more nearly adequate.

This more advanced philosophy of life has not been attained by any sudden leap forward. It has come through a slow and imperceptible movement, corresponding with the evolution of animal life. Yet the result has been at last achieved and the gradual accretions of ages have amounted to a difference great and manifest. This higher animal consciousness is, of course, still far off from that of man. Its interest lies largely in the important fact that it represents the highest perception and the highest interpretation of the world that could be at all possible before man appeared. If the development of consciousness had stopped at that point, many of our human ideas and conceptions would

never have come into sight at all. Much that now seems to us natural and obvious it would never have entered into the mind of the animal to conceive. If some of our familiar ideas could have been presented to the animal, he might have rejected them because they were not known, so to say, to his experience or science or philosophy, but were only the delusions of an uncertain faith. He might have looked upon them as "fanciful" or "superstitious" or "mystical." What is mysterious and inexplicable to the dog, however—not "dreamt of in his philosophy"—may be plain enough to man.

Fortunately—let us hope—this was not the final limit to the development of consciousness. The forces which have determined evolution have proved capable of at least one step more. They have produced the human organism and forged the human brain and have thus prepared the necessary conditions of human consciousness. Here at last we may speak, with full assurance, of self-consciousness. There may have been earlier premonitions and foreshadowings of its coming, but there was then no power in existence which could have recognized and appreciated those for what they were. Even if there was in some rudimentary sense the fact of self-consciousness, there had not yet arisen the idea of self-consciousness. Man is not only self-conscious but is consciously aware of that fact. This makes a world of difference. Man can now become an interpreter of his experience.

As man turns one way, he sees an external world

which seems solid and tangible and perceptible. As he turns the other way, he finds an inner reality which seems supersensual and ethereal and imperceptible. There arises in his mind the distinction between matter and spirit. On the maternal side, man becomes aware of a multitude of physical attributes and qualities and modes of action. He distinguishes them from each other and translates them into abstract general ideas which are interesting to his mind. He discovers laws which govern these phenomena and principles which are inherent in them and even penetrates to a reality which is entirely beyond the reach of the senses. He builds up a whole intellectual structure of science and another intellectual structure of philosophy. No other consciousness has been able even to approach such ways of conceiving the universe. On the spiritual side, man comes to the ideas of personality and mind and soul. He finds these as yet less easy to investigate, but he continues to reason and to speculate about them. He has his tentative science of psychology. He also finds himself knowing that he knows, and he seeks to understand the meaning and the modes of knowledge.

These are only faint hints of human powers as compared with the powers of the brute and bare suggestions of the capacity of human self-consciousness as compared with any form of consciousness that lies below the human level. Science and philosophy and art and religion are possible only to man, and each of them opens up to us a whole world of meaning that would have been forever closed unless human self-conscious-

ness had revealed the world under a new illumination. Within the limit of his powers, man not only feels the world but really understands it—certainly understands it better than it could ever have been understood without him. He is even able—as the beast probably is not—to conceive of powers which could understand it still better and to speculate on the possible appearance of the world in the clearer and brighter light of this better knowledge. He can go still further than this and build up the conception of an ideal world transcending the real.

There is another point of view from which the gradual growth of consciousness may be observed. Every unborn child is typical of life before the dawn of consciousness. It is so, of course, in the obvious sense that here is life as yet without consciousness but bearing within itself the potentiality of consciousness presently to come. It is so in a still more amazing sense. We are told that each new human organism, before it is born as man, first recapitulates in its own growth the whole process of biological evolution up to man. During the brief prenatal period, it passes in rapid but orderly succession through the various stages of a development which has stretched over untold myriads of years. In this new human life, consciousness is latent, just as it was latent in the lower animal forms. At the birth of the child, this consciousness awakens, just as it presumably awakened at some unknown point in biological evolution. The child's consciousness is at first hardly to be called human consciousness in the full

sense of the term. It perhaps more nearly resembles the consciousness of the lower animals. There is sensation and perception and response, but perhaps very little more.

The child halts as it were but for a moment at this stage. Very rapidly—day by day and almost hour by hour—consciousness becomes clearer and wider. Another amazing process is already under way. As the body of the unborn child recapitulated the successive stages of biological evolution, so now the mind of the infant proceeds to recapitulate the development of animal consciousness. Again the work of countless ages is rehearsed within a brief period of time. A few years suffice to traverse the whole distance between the first dawn of consciousness and the full light of human self-consciousness. Growth of the same sort had taken place before, far down in the scale of life and under less happy conditions. The amazing fact here is the rapidity of the process. This would have been impossible without a brain of human quality. The rate would probably be much slower without the richness of human experience or without the gathered wisdom of human education.

The growing child passes through all the stages of animal consciousness until it reaches the highest. At an early age its intelligence is equal to that of the most intelligent animals. Its outlook upon the world is probably much the same as theirs. We may note, however, a curious difference. The animal is in a sense more perfect than the child, and the child has more to learn

and therefore more need of education than the animal. The animal is to remain forever within the realm of instinct, and therefore it finds its native instinct a more sufficient guide and has less need to strive to reach beyond it. The child is destined to pass through the realm of instinct into the realm of intelligence, and therefore its instinct is less fixed and sure and its need of instruction is far greater. Another interesting distinction we may stop to note. The child is recapitulating the general development of consciousness; but at the same time, its own consciousness is every day becoming more sharply defined, more individual, more personal. The child is at once rehearsing the history of the past and reaching forward with prophetic instinct toward the future of its own personality.

At last the child reaches the level of the normal human consciousness, and then—it is no longer a child. Men and women differ to such an extent that it is hard to fix a point at which normal human consciousness is usually attained. It is quite as hard to say just what we should mean by normal human consciousness. Yet the idea is probably definite enough to serve a useful purpose. We should be fairly near to the normal human consciousness if we could find—as of course we cannot—the average human mind or the average of human minds. Roughly speaking, we might say that every animal is fairly typical of the class to which it belongs but that humanity does not produce typical individuals. It tends rather toward the production of individuality. Therefore the norm is hard to find.

The greatest achievement of humanity is the production of personality. Normal human consciousness represents this process at a stage where it would include the great majority of human beings. Here mind is not specially trained or refined or cultured and has no rare or exceptional qualities. Soul does not manifest itself as highly ethical or spiritual character. Personality has attained only to standards of ordinary force or charm or beauty. With all its limitations, this normal human consciousness yet rises above the consciousness of the brute by a tremendous distance. It deals familiarly with a multitude of general conceptions on all kinds of subjects—society, politics, education, morality, science, art, philosophy, religion, and what not. It is conscious of things and sensations and minds and ideas and ideals. Its outlook on the world and on life and on intellectual matters is a practical outlook, and its philosophy is the philosophy of common sense. It has a fairly good understanding of things as they appear and is disposed to take the appearance of things for their reality.

The origin and development of consciousness illuminates the whole course of evolution, throwing back upon it the light of a larger purpose and a deeper significance. It has taken place on a cosmic scale in nature at large. It is repeating itself again and ever again, in condensed and summary fashion, with every new living organism. The miracle of miracles is ever renewed, as though to make sure that we do not miss or forget its meaning. At each stage in the process, there has been

a new and higher phase of consciousness, and with this, a new and higher conception of the world. At any given stage, it would have been impossible to conceive the character of the next or to imagine that there would be any next. The consciousness of the animal could not have conceived the self-consciousness of man or the kind of world that would be open to man's view. At last, however, the forward look has become possible. Man can and does imagine that there may be a stage of development beyond the one which he has reached.

As to the possibility of advance beyond the natural and normal self-consciousness which is characteristic of mankind as distinguished from the animal, the demonstration is already here. So much of further development is already a realized fact. Above and beyond the normal human consciousness is the higher human consciousness. This manifests itself in thousands of ways. In nearly every community, there are men who rise decidedly above the general human average. Still above these, there are the world's greatest men, a select and distinguished company of superior human beings. There is nowhere any distinct break in the gradual ascent, no line at which we pass from one order of being into another; but the heights of human existence afford a rarity of atmosphere and a breadth of prospect not to be found in the valleys or on the table-lands.

There is perhaps no greater difference between the lowest mere animal and the highest than there is between the lowest man and the highest. This becomes

more evident the more we consider what humanity has actually done in the way of producing men of this higher class. Take, for instance, the world's great philosophers, a Plato, an Aristotle, a Bacon, a Spinoza, a Kant. The question here concerns the development of the thinking mind. Such men as these have a capacity for profound and subtle abstract thought which immeasurably transcends that of the ordinary man. Somewhat the same may be said of the great scientists, a Copernicus, a Galileo, a Newton, a Darwin, a Pasteur, an Einstein. Here minute and accurate observation of scientific fact is united with the power of large and swift generalization in a degree beyond all ordinary example. This superiority of great men is perhaps nowhere more manifest than in the field of art. We have only to think of such representative men as Phidias, Michelangelo, Raphael, Shakespeare, Beethoven. These are the men of imagination, the men of vision, the men of insight. They are the dreamers, the builders, the shapers, the singers, the music-makers. To the ordinary man, their achievements seem almost miraculous, due to a kind of inspiration, even further beyond his reach than the thought of the philosopher or the ordered knowledge of the scientist.

The word genius perhaps serves better than any other to mark the distinction. The man of normal human consciousness may have talent, ability, capacity, but he falls short of genius. The genius is the man who has risen to the level of the higher human consciousness and who is therefore endowed with insights

and powers beyond the reach of the ordinary man. These endowments are very truly inborn, but probably neither untrained nor inspired. Doubtless the deeds of genius seem natural enough to itself. It has an instinctive knowledge of the right way for accomplishing its particular task and can often do easily what other men cannot do at all. Its seemingly peculiar powers are perhaps not essentially different in kind from ordinary human powers but rather so far elevated and intensified as to seem of another order. Genius might be thought of as supernormal in the sense that it is distinctly above the level of normal human consciousness. It is not supernormal, however, in the sense which is commonly given to the word. Genius, of course, in its widely varied manifestations, is one of the accepted facts of human life and history. However we may define it or understand it, we do not question it as a fact or regard it as anything superhuman. There are men, living and dead, whose gifts and works deserve such a word, and theirs are the great names of humanity. They are so exceptional and so richly endowed that they seem to be far above the rest of mankind. It may properly be said of them that they represent a higher level of human consciousness.

Through education and knowledge and thought and experience, it is possible for the ordinary man to raise his level of consciousness until he at least apprehends in some measure what is going on upon the higher level. He may indeed rise to a considerable degree of appreciation. Contact with the higher is in itself an

educative influence. We learn to appreciate genius by associating with genius. There are, however, decided limits to the possibility of such elevation. The lower man may in some measure participate at second hand in some of the experiences of genius; but he can never be a genius or have these experiences by virtue of his own original and native quality. For the most part, the lower man finds the higher a mystery not to be understood. It is, of course, a relative matter. To the ignorant savage, reading and writing are a profound mystery and an automobile is something supernatural. To a highly educated man, Einstein's doctrine of relativity might be equally baffling. To others, a great symphony or a great poem is as a sealed book. In part these difficulties are due to a defect of knowledge and not to any essential deficiency of mind. If the knowledge could be supplied, the mind might find it entirely possible to understand. This, however, is by no means the whole story. To a very large extent, the lower mind is simply incapable of being informed or educated up to a comprehension of the higher. It cannot even conceive the thought of the higher mind, much less interpret or understand it. In order for the mind to be capable of such comprehension, it must itself be, at least in part, upon the higher level.

The upward trend of animal consciousness is purely automatic and involuntary. The animal cannot purpose to advance or strive to advance, cannot even conceive the idea of advancing. Man is self-conscious, and self-consciousness is not only consciousness that is aware

of itself but consciousness that can judge itself and help itself. It is possible for individual minds to rise partly above their own natural level and to come within sight of a higher level. Is it possible to raise human consciousness as a whole? Within certain limits, at least, this does seem possible. If all human minds could be improved to their fullest capacity, this in itself would be an improvement of the race as a whole. Humanity has of course made tentative efforts in this direction, but there has been no determined and concerted purpose to accomplish the larger aim. If humanity could become self-conscious and self-determining to this extent, it would at least be able to realize all the possibilities which are now latent in man. This in itself would probably be such a revelation of power and capacity as men have not yet dreamed of.

There would, of course, still remain the limits determined by the capacities of individual minds. These would stand unalterable by the will of man. In order to make possible any further advance, nature would have to coöperate with man by producing from such an improved race human beings of larger average capacity. Perhaps man could to some extent turn the forces of nature in that direction. Biology still refuses us the right to believe in the inheritance of acquired characters, and we therefore cannot appeal to that possibility. Still, the fact remains that in some way evolution has gone forward. Life has developed and consciousness has developed with it. There is no reason to suppose that the process has come to an end or that

whatever causes there may be have ceased to operate. If man can in this sense count on the coöperation of nature, then it seems at least a reasonable hope that the level of the normal human consciousness might gradually rise until it reached the level of what we now regard as the highest human consciousness.

There is still another possible line of advance. Human consciousness might come to have a wider range. An animal can do all the things that are proper to its species—a little better or a little worse, it may be, but with no substantial difference. With man, as we know very well, it is far otherwise. Man has made himself a specialist. It is not often that we find a poet and a chemist, or a musician and a mathematician, or a financier and philosopher, in one and the same person. This, of course, is natural enough. Man's possible activities are countless and there is a limit to the time and energy of the individual. To be a master of one trade, man must not be a "Jack of all trades." We speak, here, however, of capacity. This determines other limits. Some men, for instance, are incapable of mathematics and others are quite as incapable of music. Nevertheless, it is desirable and to a large extent possible that the man of one trade should understand and appreciate the points of view involved in other trades. He should have the technique of one trade and the ideas of many trades. As Lord Bacon suggested, one should aim to know everything of something and something of everything.

The world has much need of the mind that shall be

broad without being shallow, need of broader consciousness as well as of higher consciousness. Much in this direction could, of course, be accomplished within the limits of present human capacity. When man has used to the full all the capacity he has, perhaps nature will furnish him with more. Is that not what she has already done in the case of the animal? She found the animal living up to the full measure of its capacity, doing well all the things that an animal could do; and then she created the higher animal called man and thereby opened up a whole new world of consciousness and of opportunity.

She finds man as yet realizing the possibilities of this new world in only a half-hearted and fragmentary fashion. When his present mind has attained to its full stature and has broadened out so as to encompass all human capacities in each individual, then she may create the Superman. Nay, man will already be the Superman. It is, of course, almost beyond conception that each man could thus become—like the animal—fully representative of his class. Nature has a way, however, of reducing the conscious to the automatic. Much that is now a matter of conscious effort might become a matter of instinctive action. Attention and will would thus be released for higher tasks.

From each new height of consciousness there is a new vision of the world. Presumably each successive vision is a closer approximation to ultimate reality. The vision of the animal is real enough in the popular sense of the word but not in the scientific or the

philosophical sense. Man can see, readily enough, from his higher point of view, how inadequate and even deceptive is the animal's conception of things and values. It is good enough for the animal, true enough for the animal's purpose; but it is neither good enough nor true enough for man. In its turn, the conception of the world which arises in the normal human consciousness is open to a similar criticism. It is good enough and true enough for man's ordinary thinking and for the practical purposes of man's daily life, but it is not good enough or true enough for man's scientific and poetic and philosophical thought—for his higher consciousness.

The higher human consciousness realizes a world of which the ordinary man scarcely dreams. Before the mind of the scientific thinker, visible and tangible objects simply vanish away and give place to the swift energy of electric particles. Before the mind of the philosopher, the universe fades like a mirage of unreal appearances through which he peers to catch, if may be, some intellectual glimpse of an ultimate reality. Before the mind of the poet, there opens up a world of divine illusion which he knows to be a dream but which he cherishes as the symbolic reflection of truth and beauty. If these three—scientist, philosopher, poet—could only understand each other and unite their perceptions, we might be at least a step nearer to the light which all are seeking. Each without the others falls short of an adequate conception of the world and of human life.

If it could be supposed that the so-called super-

normal faculties represent a genuine extension of human powers, our idea of human consciousness would have to be considerably enlarged. The new conception which they imply would then present itself as a valid one and would, moreover, be extremely interesting and significant. From this point of view, mind would appear as less dependent upon matter. Spirit would have a more assured reality and would play a more definite part in human affairs. There would be the possibility of more direct contact between human minds and of more immediate influence of one mind upon another. More important than all else, the way would be open for confident belief in some sort of communication with spiritual being, even of man with God. Religion would present itself not merely as a matter of belief and aspiration but veritably as a matter of spiritual communion and soul experience. If it were really possible for these supernormal experiences to become an undoubted part of normal human consciousness or even of the higher human consciousness, then humanity would by that very fact be upon a new and higher conscious level. Possibly there is here reality yet to be fully grasped by man's growing consciousness. This may be a road along which the advancing human spirit is destined to travel.

Is it possible for human consciousness to develop beyond any known bounds of present human capacity? That, of course, is a question which no man can answer. Yet if one cannot positively affirm, neither can one positively deny. At no stage in the development of con-

sciousness could the next stage have been foreseen; and each new stage, judged from below, would have seemed an impossible miracle. Yet nature is in the habit of performing impossible miracles. Many of the things which she has already done would be simply incredible—if they did not exist. All this, of course, offers no basis for prediction. Is there any ground for a more confident expectation? Some ground, we may venture to say, although it be but shadowy. Human consciousness is part of a great world development. Its general course can be traced, and its results are a part of our assured knowledge. It is not reasonable to think that it has ceased at this point. Somehow and somewhere, it is going forward. How and whither, we can as yet only imagine.

Our knowledge of the past gives as it were the equation of the curve; but the equation contains an unknown imaginary quantity which only future knowledge can eliminate. The most probable forward direction would seem to be that which is indicated by our expectation. Upon what does that expectation rest? First, upon our desire. What man finds it possible really to desire, he finds it possible to hope for. Secondly, then upon our hope. What man finds it possible really to hope for, he finds it possible to believe in. Thirdly, then, upon our faith. What man finds it possible to believe in, he finds it possible to expect. In a sense beyond the knowledge of science, but known to the poet's insight, hope and faith and expectation are creative forces. Man may "hope till Hope creates from its own wreck the thing

it contemplates." Man may believe and expect until his mind, like the poet's imagination, "gives to airy nothing a local habitation and a name." "Faith is the substance of things hoped for, the evidence of things not seen." So it may prove to be the case that man's hope and faith and expectation are not only conjecturing but actually foreseeing and actually helping to determine the direction which will be taken in the future development of human consciousness.

Aside from any questions concerning future development, man's present consciousness is in many ways a mystery even to itself. His ordinary experience not seldom outruns his knowledge and eludes his best attempts at explanation. Sometimes such experience can be interpreted in terms of higher consciousness. The ordinary man may feel and act in ways which are mysterious to him but which are familiar enough to the man of higher intelligence. On the higher level, however, the experience is repeated. Genius often feels and acts in ways which not even genius can explain. Perhaps some of these may be capable of explanation in terms of supernormal faculties. The point is that human consciousness seems to be trying to outreach itself, as though it had wider scope and greater powers than it was consciously aware of. Psychology seeks explanation through the subconscious, but subconsciousness is so far the name for a mystery. So likewise are the supernormal faculties. Perhaps the subconscious and the supernormal represent this instinctive striving of consciousness to transcend itself. It may be that the

subconscious is the not-yet-conscious. It may be that the supernormal still manifests itself but imperfectly because it has not yet fully emerged from the darkness of subconsciousness into the light of consciousness. It may be that the supernormal will grow in clearness as consciousness extends its limits. In such a case, supernormal manifestations might be a present possibility for personalities especially sensitive or gifted in this direction. This is what we seem to find. If other men are endowed with supernormal faculties, these are as yet hidden in the subconscious.

The very fact that we can recognize something above us and that we are at the same time aware of something below us implies that consciousness has been a matter of growth and of gradual development. This is partly due to causes working upon it from without, but it is also partly due to inherent powers working from within. How far further development may reach, we cannot even imagine. It may stretch to infinity. All this is especially true of human self-consciousness. We ourselves stand in the very midst of that and have some intuition of its nature and of its possibilities. Human self-consciousness is not static but dynamic. It is in very large measure self-moved and self-controlled and self-determined. It is not independent of nature; but within the bounds fixed by nature, it can do what it wills to do. It can will to coöperate with nature and to use the forces of nature for the accomplishment of its own ends. It can will to be itself and to develop itself and even to transcend itself. This, of course, is not to say

that it can defy all external and internal conditions and suddenly become something which it is not. The truth is perhaps best expressed by saying that it may will to realize all its inherent possibilities, so far as outward conditions will allow, and that it may thus by its own effort help to realize what it wills.

Is not this self-realization the great purpose of human existence? Is it not the purpose of the world so far as man is concerned? Is it not the underlying reason for the union of mind with matter? The self could hardly realize itself unless it had an opportunity for contact at some point with the not-self—just as force would hardly realize itself except as it met with some sort of resistance. This would indeed be the necessary first step toward self-realization, without which all other steps would be impossible. Another great step in self-realization is made possible by human life, by association and communion with other selves. This still further confirms the self as to its essential quality and still further defines it as individuality and personality. The self comes to still further realization through the exercise of its powers and the enrichment of its being. It grows through education and knowledge and thought and experience and life. When it has learned all that this existence can teach it, it may need another; but this existence has made it what it already is.

To speak thus of the self is to speak of the soul. Without the soul, there is no self-consciousness, for it is the soul that is self-conscious. Without the soul, there is no mind, no individuality, no personality, no

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capability of reason or emotion or imagination. It is the soul that has character and intelligence and aspiration to immortality. Without the soul, thought fades away into a mere mechanism or into nothing. Consciousness becomes a mere reflection of light from an eye that cannot see. Knowledge becomes an illusion of nothing, with nothing to have the illusion. With the disappearance of knowledge, the world also must disappear; for a world that cannot be known is, for us at least, a world that does not exist. We fall into a universal nihilism. On the other hand, if the soul exists, the nothing again becomes something. We may not be able to understand what it is, but at least we know that it is there and that it is worth while to try to understand. It may be an illusion of the soul; but at least the soul is the dreamer and may hope some day to awake from its dream and behold the reality face to face. In this direction turns our faith, in this direction lies our hope. If there is any world, if there is any life, if there is any consciousness, if there is any knowledge, if there is any thought, if there is any spiritual development, we must seek them through the indispensable soul.

Whether or not the soul can believe in all these things depends upon its faith in itself. It must not expect to see everything in the clear light of assurance but must nevertheless rely upon its own vision. That vision is doubtless not yet as perfect as might be desired. On the other hand, perhaps the soul itself could see clearly enough if the world of nature and the world of

spirit were more clearly revealed. Many things in both worlds are yet obscured by their own darkness or by the darkness of human ignorance. Man's failure to know is not necessarily an inability to understand. His science and his philosophy represent his effort to know more and to understand better. His poetry and his religion represent his effort to reach beyond knowledge.

The soul of man is like one in a lighted room at night. What is within the room he can see clearly. What is outside he can hardly see at all, partly because of the darkness without and partly because of the light within. He seems to look through his windows, but what he sees is largely a reflection of himself and his immediate surroundings. If he approaches close to the window and shades his eyes from the light, he can faintly distinguish uncertain shapes in the gloom. As the day dawns, his own light grows pale, and both the inner and the outer world are revealed in the light of the sun. With human consciousness, it is yet night. The soul lights the world as best it may with its own little candle and waits for the day.

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